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AIR PROGRAMS; IMPLEMENTATION PLANS

Transportation and Land Use Controls; Texas Plan

Title 40—Protection of Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER C—AIR PROGRAMS

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

Transportation and Land Use Controls

On April 30, 1971, pursuant to section 109 of the Clean Air Act (42 U.S.C. 1857c-4), the Administrator promulgated national primary and secondary ambient air quality standards for six pollutants (40 CFR Part 50). The Act requires that the primary standards protect the public health with an adequate margin of safety and that the secondary standards protect the public welfare from any known or anticipated adverse effects. Under section 110 of the Act (42 U.S.C. 1857c-5), States were required to prepare and submit to the Administrator plans for implementing the national ambient air standards in each air quality control region in the State. The Administrator published on May 31, 1972, (37 FR 10842, 40 CFR Part 52) his initial approvals and disapprovals of State implementation plans developed and submitted under this provision of Federal law.[1]

The presence in the ambient air of three of the pollutants for which control strategies were required to be submitted by States—carbon monoxide, hydrocarbons, and photochemical oxidants—is largely attributable to motor vehicles; consequently many States were unable to formulate and submit adequate control strategies that utilized only limitations on emissions from stationary sources. However, as the Administrator noted in his May 31 approval/disapproval of implementation plans, neither the States nor the Environmental Protection Agency had any practical experience that would permit the development of meaningful transportation control plans or the prediction of their impact on air quality. In this context, "transportation control plan" is defined as the summation of individual actions (transportation controls measures) that will, when taken collectively, reduce concentrations of carbon monoxide and photochemical oxidants in the atmosphere from those achieved by the stationary source control program and the Federal motor vehicle control program (FMVCP) to the level prescribed by the National Ambient Air Quality Standards. States were advised in August 1971 (36 FR 15486) that adoption of transportation control plans could be deferred beyond the statutory deadline for submittal of implementation plans but that the submitted plans would have to define the degree of emission reduction to be achieved through transportation control measures and identify the measures being considered. Transportation control plans were to be designed to augment the existing state implementation plan and the FMVCP. States were required to submit adopted transportation control plans no later than February 15, 1973.

Many States requested 2-year extensions pursuant to section 110(e) of the Act (42 U.S.C. 1857-5(e)) for the attainment of the primary standards for the three pollutants based on the unavailability of transportation control measures. The Administrator determined that, in fact, transportation control measures would not be available soon enough to permit attainment of the primary standards within the 3-year time period prescribed by the Act; therefore, 2-year extensions were granted at the request of those States that had determined that transportation control measures would be necessary. In some cases, this meant that States were required to submit on February 15, 1973 transportation and/or land-use control measures that would achieve the standards by 1977. In other cases, the 2-year extension meant that certain States would not have to submit transportation control measures because the FMVCP and/or stationary source control would be adequate to achieve the standards by 1977 without the application of any other transportation and/or land use measures. In order to assist the States in the development of transportation control plans, the Environmental Protection Agency conducted numerous studies and made the results available to the States. In addition, contract assistance was provided in developing the plans for 14 of the affected regions, and the reports of these studies were made available to all the States.

On January 31, 1973, the U.S. Court of Appeals for the District of Columbia Circuit decided the case of "National Resources Defense Council Inc., et al. v. Environmental Protection Agency" 475 F. 2d 968 (1973) and seven related cases, hereafter referred to as NRDC v. EPA. The court order held that the Clean Air Act did not permit the delay in submission of transportation control portions of State implementation plans until February 15, 1973, or permit the granting of extensions to mid-1977 for attainment of the national primary air standards where plans had not been submitted. The order required the Administrator to formally rescind through notice to the States and publication in the FEDERAL REGISTER the extension of time granted for submission of transportation and/or land-use control portions of implementation plans. It also required the Administrator to formally rescind in the same manner the extension granted to several States to delay implementation of their plans or portions thereof until May 31, 1977. The court further ordered the Administrator to inform the States concerned that all States that have not yet submitted an implementation plan fully complying with the requirements of the Clean Air Act of 1970 must submit such a plan by April 15, 1973. That plan must satisfy each and every requirement of section 110(a)(2)(A)–(H) if it is to be approved by the Administrator.

In accordance with this order, 22 States including the District of Columbia were notified by telegram on February 5, 1973, that any extensions granted because of the unavailability of transportation and/or land-use controls were canceled and that plans for the attainment and maintenance of the standards for the three pollutants would be required by April 15, 1973. A FEDERAL REGISTER notice was issued on March 20, 1973, (38 FR 7323), to complete the requirements of that court order by specifically amending the provisions of this part with regard to each of the States concerned. These amendments provided that every State granted an extension to achieve those primary standards and/or permitted to defer submittal of the transportation and/or land-use control strategies until February 15, 1973, would be required to submit no later than April 15, 1973, transportation and/or land-use controls showing achievement of the standards by 1975. In addition to those States that were required to submit transportation and/or land-use control strategies on February 15, 1973, a number of other States, which had regions that would not achieve the standard by 1975 but which had not been required to submit transportation control strategies because the FMVCP was capable of achieving the standards by 1977, were required to submit transportation control strategies on April 15, 1973. States that were not granted an extension but which had deficient plans were also required to submit transportation control strategies on April 15, 1973. Strategies adopted by the States must provide for attainment and maintenance of these standards by May 31, 1975. At the time of submission of these plans on April 15, 1973, the Governors of the States could request an extension up to 2 years for compliance with the provisions of these plans if the specific requirements of section 110(e) are satisfied by the State plan.

By June 15, 1973, 16 States including the District of Columbia had submitted transportation control plans. These plans were reviewed by the Environmental Protection Agency and were made available for public review and comment, including public hearings held by the States. Comments were received from the general public, other Federal agencies, public interest groups, industrial and business groups, and others. Based upon the comments received and the Agency's evaluation of the plans in light of pertinent legal requirements, the Administrator announced his approval/disapproval decision on June 15, 1973.

[1] Other approval and disapproval actions have been published as follows: July 27, 1972 (37 FR 15080), August 11, 1972 (37 FR 16177), September 22, 1972 (37 FR 19806), September 26, 1972 (37 FR 20117), October 28, 1972 (37 FR 23065), November 9, 1972 (37 FR 23836), February 8, 1973 (38 FR 3599), March 8, 1973 (38 FR 6279), March 20, 1973 (38 FRA 7323), March 23, 1973 (38 FR 7554), April 10, 1973 (38 FR 9088), May 14, 1973 (38 FR 7323) March 23, 1973 (38 FR 12920), May 23, 1973 (38 FR 13561), June 5, 1973 (38 FR 14752), June 15, 1973 (38 FR 15722), June 22, 1973 (38 FR 16550), primarily transportation controls), June 22, 1973 (38 FR 16351), July 3, 1973 (38 FR 17726), July 13, 1973 (38 FR 18652), July 16, 1973 (38 FR 18878), August 3, 1973 (38 FR 20835), August 14, 1973 (38 FR 20835), August 14, 1973 (38 FR 21918), and August 21, 1973 (38 FR 22473).

The approval/disapproval decisions were based on a detailed evaluation of the plans submitted by the States. Criteria for this evaluation include adequacy of control plans, provisions for adoption and submission procedures, accuracy of air quality data and emission inventories, extension request considerations, provisions for air quality and source surveillance, review of legal authority, adequacy of resources, and provisions for intergovernmental cooperation.

If the Administrator disapproved a State plan or portion thereof, or if a State failed to submit an implementation plan or portion thereof, he was required under section 110(c) of the Act to propose and subsequently promulgate regulations setting forth a substitute implementation plan. If regulatory portions of a State plan, including control plans and related rules and regulations, were disapproved or were not submitted, regulations setting forth substitute portions were proposed. When disapproved portions were of a non-regulatory nature (air quality surveillance, adequacy of resources, and intergovernmental cooperation), and therefore not susceptible to correction through promulgation of regulations by the Administrator, detailed comments were included in the evaluation report; in such cases, the Environmental Protection Agency will work with the States to correct the deficiencies.

Proposals for various States were published as follows: January 22, 1973 (38 FR 2194—California); February 7, 1973 (38 FR 3526—California); July 2, 1973 (38 FR 17682—California, Massachusetts, Minnesota, Ohio); July 3, 1973 (38 FR 17782—New Jersey, Pennsylvania, Texas); July 16, 1973 (38 FR 18938—Alaska, Arizona, California, Illinois, Utah, Washington); July 18, 1973 (38 FR 19132—California); August 1, 1973 (38 FR 20469—California); August 2, 1973 (38 FR 20752—Colorado, District of Columbia, Oregon, Maryland, Virginia); and August 3, 1973 (38 FR 20851—California, Minnesota, New Jersey, Texas).

To the extent possible, the Administrator's evaluation of State plans reflects the latest information submitted by the States. In the interest of giving the States every opportunity to bring their implementation plans into full compliance with the Act and 40 CFR Part 51, the Environmental Protection Agency has notified States that modifications submitted after the deadline for submittal of State plans would be accepted and considered provided that such modifications were made and submitted in accordance with the requirements of 40 CFR Part 51. Accordingly, many States have been, and still are, making and submitting modifications of their implementation plans.

The Act directs the Administrator to require a State to revise its implementation plan whenever he finds that it is substantially inadequate for attainment and maintenance of a national standard. In accordance with the statutory mandate, the Environmental Protection Agency will continue to evaluate the State plans and will, as necessary, call upon the States to make revisions.

Clean Air Act Requirements

Section 110(a) of the Clean Air Act requires that a valid implementation plan set forth a control strategy that attains the ambient standards as expeditiously as practicable, but no later than May 31, 1975. Some of the plans promulgated will meet this date. For those that cannot, however, an extension under section 110(e) of the Act of up to 2 years may be granted, if necessary, for attaining an ambient air quality standard. To qualify for any extension, a plan must demonstrate that certain elements of the necessary control strategy will not be available by 1975; that there are no earlier, unused alternatives to these delayed strategies; and that emission control measures that are, in fact, reasonably available will be applied as soon as possible.

The effect of the requirement that an extension be granted only for a chosen control measure if "the necessary technology or other alternatives are not available," if "reasonably available alternative means" of emission reduction are considered and applied, and if "Interim measures of control" that the Administrator determines are "reasonable under the circumstances" are applied, is to assure that the standards are obtained (in the words of section 110(a)), "as expeditiously as practicable." In essence, if a control measure is "technologically feasible," "practicable," "available," and "reasonable * * * under the circumstances,"it should be part of a plan before any extension is given for other measures whose implementation in 1975 would not be technologically feasible, practicable, available, or reasonable under the circumstances. This provision of the Act applies to plans promulgated by EPA as well as to those submitted by the States. If EPA believed that such an extension would be needed for a region, the proposal to grant such extension was included in the proposed rulemaking.

Under the Clean Air Act the standards must be met by 1977 at the latest. Although both States and EPA should attempt to do this in the least costly and most practical way, the requirement of the statute is unconditional. The standards must be met by the deadline regardless of cost or technical feasibility. (A limited delay to 1978 may be allowed under § 110(f), under certain conditions.) In some regions of the country this would be possible only if substantial gasoline rationing is imposed, and the plans proposed for those regions accordingly provide for this measure in order to meet the technical requirements of the law. This does not mean, however, that the Administrator seriously desires to use such a measure.

Accordingly, it is intended to seek an amendment to the Clean Air Act for the specific purpose of allowing the Administrator to extend the attainment date and to take appropriate alternative measures for the relatively few cities that require extensive gasoline supply limitations to meet a 1977 attainment date. It should be emphasized, however, that any action by the Administrator to seek an extension beyond 1977 does not permit the delay in implementing all available control measures, even though the air quality standard will not be attained in 1977. The Administrator's intention to request additional time for attaining the standards in certain areas should in no way inhibit the rapid implementation of the feasible control measures discussed below. An additional amendment to the Act may be needed to strengthen legal authority and permit the more effective use of other measures that might better achieve long-term reductions in vehicle traffic, such as land-use planning.

Pollutant Characteristics

Carbon monoxide is called a "primary" pollutant because it is emitted directly into the air. On the other hand, photochemical oxidant (primarily ozone) is a "secondary" pollutant; it results from the reaction of two primary pollutants (hydrocarbons and nitrogen oxides) in the presence of sunlight. As such, it differs from carbon monoxide in that the correlation between emissions of the primary pollutants and concentrations of the secondary pollutant is complex and subject to many variables. The reduction of oxidant concentrations depends upon reduction in precursor (primary pollutant) emissions, but not necessarily on a one-to-one, or linear, basis. The extent of the reduction in hydrocarbon emissions required to meet the air quality standards for oxidants, as determined by statistical evaluation of observed data, is specified in 40 CFR Part 51, Appendix J. However, the maximum measured values for the 1-hour photochemical oxidant values that can be used with the curve in Appendix J is only about 550 micrograms per cubic meter ($\mu g/m^3$) or 0.28 parts per million (ppm). Several urban areas have experienced concentrations greater than this. Another limitation of the Appendix J procedure for determining needed hydrocarbon reductions is that the data base embodied in Appendix J was derived from oxidant and total hydrocarbon areometric data taken from several large cities—namely, Los Angeles, Washington, D.C., Denver, Cincinnati, and Philadelphia. Some areas, however, are now using an approach for calculating the effect of hydrocarbons according to their differing "reactivities", rather than using total hydrocarbons as the indicator. This differing approach is currently subject to scientific debate and constantly changing knowledge. Appendix J would not necessarily be appropriate for determining the degree of selective control of reactive hydrocarbons, as an alternative to control of total hydrocarbons. As a consequence of the use of reactive hydrocarbons in certain instances, and the limitations of the Appendix J curve in others, linear rollback was used in some transportation control plans to calculate required hydrocarbon reductions. EPA is continuing to study these problems and, if strategy

changes become necessary as a result of future conclusions, appropriate plan revisions will be requested or proposed.

Transportation Control Measures

Transportation control plans provide for reductions in carbon monoxide and hydrocarbon levels required beyond the reductions provided by the Federal motor vehicle emissions control program and stationary source regulations set forth in the previously approved State implementation plans. These reductions are to be accomplished through the implementation of the transportation control plans incorporating the measures discussed below. These measures include additional stationary source controls, measures providing for a reduction in vehicle miles traveled (VMT), inspection and maintenance programs, retrofit emission controls for in-use vehicles, and gasoline supply limitation. Technical information on the inspection and maintenance and retrofit measures discussed below are set forth in Appendix N to 40 CFR Part 51. The appropriateness of a particular measure for a specified area is determined by a variety of factors, which are also discussed below. Although the costs of certain measures are discussed in this preamble, the social and economic effects of the transportation plans have been evaluated on a state-by-state basis and are set forth in the individual State preambles.[2]

Considerations in selection of measures. The determination of which measures should be in a plan for a particular area is based upon several considerations. These include the severity of the pollution problem, the availabilty of control measures, the existing local control activities and conditions, the State transportation plans, the public hearing comments, the disruptive impact of certain measures, and the pollutant controlled.

In many areas with mobile source pollution problems, the air quality standards can be achieved by only a shift from our present reliance on the automobile to a more balanced reliance on all forms of public and private transit. In a number of these areas, emission controls on motor vehicles alone will never be adequate. Nonetheless, substantial improvement in air quality can be achieved by reductions in vehicle miles traveled to some extent by 1975 and up to 10 to 20 percent by 1977.

Since the air quality standards are to be achieved as expeditiously as practicable, the Administrator has considered the speed with which various emission control strategies could be implemented. Measures such as those providing for some VMT reductions can be implemented before other measures such as retrofits. Extensions in time, thus, could not be granted to retrofit measures until appropriate VMT reduction measures were provided at earlier dates.

The Administrator considered the existing activities, controls, and conditions in local areas. In view of the significant variations in local situations, the Administrator recognizes that transportation plans must be formulated with flexibility to complement local conditions. If an urban area is developing expanded mass transit facilities, the Agency's transportation plan might provide complementary control measures such as bus/carpool lanes. Conversely, if stationary source controls are presently inadequate, additional stationary source controls might be added in lieu of other measures.

The State plans and public hearings aided this process. If the States have submitted plans that are in part approvable, the Administrator has attempted to promulgate measures that supplement the approved portions the measures included in the plan the State is expected to submit. The Administrator has also made many changes based upon constructive public hearing testimony on the proposed plans.

The disruptive impact of various control measures was reviewed. Certain measures, such as the catalytic retrofit device, may place a large financial burden on the individual vehicle owner as compared with other retrofit devices or VMT reduction measures. On the other hand, the amount of VMT reduction that could be accomplished without a significant disruption varied according to the transit alternatives and traffic patterns existing in a specific region. The Administrator considered these factors and their relationship to the legal mandates of the Clean Air Act.

Characteristics of the pollutant being controlled had an impact on the plan. Carbon monoxide is generally a localized pollutant problem often limited to a central business district. The oxidant or smog problem, however, usually covers an entire urban-suburban area. Consequently, the VMT reduction control measures may vary according to an area's pollution problem. Furthermore, certain retrofit control devices are more effective on controlling the emissions of carbon monoxide than hydrocarbons or the reverse.

Based on the factors noted above, the Administrator generally determined the control strategy according to the following priorities, which reflect guidance provided by the statute: (1) Additional stationary source control; (2) some VMT reduction measures and/or limited inspection and maintenance; (3) additional VMT reduction measures, and/or vehicle retrofits; (4) catalytic converter retrofits; and (5) gasoline supply limitations in 1977.

Additional Stationary Source Controls

Controls to prevent hydrocarbon emissions will be imposed on a variety of stationary sources. These regulations have been patterned using the general examples of emission limitations attainable with reasonably available technology (40 CFR Part 51, Appendix B). The major changes have been to tailor the requirements to local restrictions such as the Los Angeles County Air Pollution Control District (APCD) Rule 66 and the Texas Regulation V—Control of Air Pollution from Volatile Carbon Compounds. In addition to stricter controls on many organic solvents used for paint thinners, dry cleaning, degreasing, printing, and other industrial processes, vapor recovery systems that prevent evaporation of gasoline vapors into the air will be required for the various phases of gasoline marketing. Most stationary source controls can be implemented by 1975. The implementation of vapor recovery systems depends upon whether the controls are placed on the filling of service station tanks (Stage I), or on the filling of individual vehicle tanks (Stage II) and whether the degree of control in Stage II is 80 percent or 90 percent. In most regions of the country, the Administrator has concluded that implementation of Stage I controls can be completed by March 1, 1976, assuming that all regulatory authority is adequate by March 1, 1974, and that 24 months are needed for full implementation with partial implementation achieved by March 1975. If the Stage II measure requires 80 percent control, its implementation can be completed by June 31, 1976. Much of the work needed to develop such systems is already underway. If a Stage II measure requires 90 percent control, its implementation can not be completed until May 31, 1977, since the technical problems are greater. In a few regions, these timetables can be accelerated, particularly where the number of stations involved is not excessive. The EPA is currently carrying on an investigation of the desirability of exempting certain organic compounds from control and of the adequacy and feasibility of various hydrocarbon emissions control methods.

Moderate Reductions in Vehicles Miles Traveled

In the majority of regions requiring additional controls, the combined impact of stricter controls on stationary sources and the establishment of an inspection and maintenance system will not provide emission reductions adequate to achieve the standards by 1975. Consequently, EPA is promulgating a variety of measures to reduce vehicle miles traveled in these regions.

The Administrator has noted that in several urban areas a shift from our present reliance on automobiles occupied by one or two persons to a greater reliance on other forms of transit is essential to the achievement of the air quality standards. Significant reductions in vehicle miles traveled can also be accomplished within a limited time span. In making this determination, the Administrator recognizes that the States have had practically no experience with transportation control measures as a means of dealing with air quality problems and that the success of particular VMT reduction measures is difficult to predict. However, recent developments involving bus lanes, mass transit improvements,

[2] "The Clean Air Act and Transportation Controls, An EPA White Paper", published in August, 1973, by the Office of Air and Water Programs, Environmental Protection Agency, provides additional analysis of social and economic impacts related to transportation control requirements.

carpool programs, bikeways, and other innovations indicate that many VMT reduction measures are available and feasible. Furthermore, the public in many of our urban areas recognizes the need to place less emphasis on the automobile for urban mobility and is already encouraging the implementation of steps to develop alternative forms of transit. Accordingly, the Administrator believes that reasonable VMT reduction measures can be successfully implemented.

Some of the regulations being promulgated will have significant effects on the future development of urban transportation in the major cities of this country. A clear implication of these air plans is that future augmentation of mass transit must focus not only on the center city streets but also on urban/suburban routes. It is expected that the regulations will lead not only to substantial reductions in air pollution, noise, congestion, and energy consumption, but to the development of more mass/rapid transit to serve the growing urban and suburban regions of the nation. The need, desirability, and feasibility of reducing urban auto use are no longer issues. The problem is determining the degree to which VMT reductions can be reasonably implemented within the limited time frames.

The amount of VMT reduction that can be considered "reasonably available" varies greatly according to a city's individual characteristics and the ability of other modes of transportation to absorb the demand that would be created by a significant VMT reduction. A measure cannot be considered "reasonably available" if putting it into effect would cause severe economic and social disruption. Although some reduction in personal travel could certainly be absorbed without disruption, to achieve a significant VMT reduction, the bulk of the travel displaced from single-passenger automobiles must be absorbed by such other modes of transportation as carpools, walking, bicycling, or public transit.

The significant expansion of public transit facilities that can be accomplished by 1975 depends on the upgrading and expansion of bus services. Much can be done in this regard. Scheduling and service can be improved. Individual lanes of freeways and other major roads can be set aside for the exclusive use of buses. Significant numbers of new buses can be purchased and put into service by 1975; according to Department of Transportation figures, 2,500 transit buses were sold in this country in 1972, but there is considerable potential for expansion of the transit industry's production by two- or three-fold. Foreign sources of supply could provide additional resources.

The Environmental Protection Agency is working with the Department of Transportation to assure increased Federal support for short-term augmentation of mass transit capacity and appropriate modifications of highway facilities to permit increased utilization of mass transit.

In addition to public transit, part of the transportation demand created by VMT reductions can be absorbed by carpools. Private automobiles, which are designed to carry four to six persons, carry an average of 1.1 to 1.4 persons per trip for work trips in major urban areas, and thus represent the largest unused pool of transportation capacity presently available.

The measures mentioned above are primarily concerned with providing an alternative to low-occupancy use of private automobiles. Although measures such as buying more buses and improving bus service, providing for carpool programs, building bicycle paths, and (in the long run) building new rapid rail transit systems increase the availability and attractiveness of alternative transit forms, VMT reductions will not necessarily be achieved unless disincentive restrictions are placed on the use of automobiles.

The applicability of both measures—incentives such as bus lanes that increase the attractiveness of alternative transit forms and disincentives such as parking limitations that discourage the low-occupancy use of private automobiles—varies according to the conditions in the individual urban area. For example, bus lanes are a more appropriate strategy in Washington, D.C. than certain other areas. Similarly, parking restrictions are more applicable to a major center like Boston than to a small city with few transit alternatives like Fairbanks, Alaska.

After consideration of the already available transit alternatives, the city's local conditions, and the applicability of various incentive and disincentive measures, the Administrator has determined that varying degrees of VMT reduction are feasible in particular areas. The plans developed suggest that a 3 to 10 percent VMT reduction can be achieved in the vast majority of affected regions by 1975. Since the Act specified that all reasonably available measures be instituted before any time extension is granted, the Administrator is taking into consideration all VMT-related measures presently being implemented by a municipality and augmenting those measures with methods that are available, applicable, and adoptable in the individual area by 1975.

Through our studies and the public hearing process, the Agency has also determined that it may be unrealistic to expect reductions in auto use in a region as a whole greater than 10 to 20 percent by 1977. Greater reductions may be achieved in limited areas under appropriate circumstances as is illustrated by New York City, which has a well developed transit system and hopes to accomplish a 40 percent VMT reduction in the downtown area by 1977. Generally, however, reductions beyond 10 to 20 percent would require a special and, in most cases, unreasonable effort unless driving is to be cut without a corresponding increase in mass transit. Achievement of even the levels provided for in these plans will require a strong commitment by local areas to implement strict disincentive programs, improve mass transit, and make carpooling or other programs work.

EPA is promulgating a number of measures designed both to increase the attractiveness of alternative forms of transit and to discourage the low-occupancy use of automobiles. The measures include: on-street and off-street parking reductions, regulatory fees for mass transit augmentation, vehicle free zones, bus/carpool lanes, carpool matching systems, carpool programs stressing preferential treatment, and heavy-duty vehicle bans. In some instances, proposed VMT measures are not being promulgated. These various alternatives are presented in the following discussion.

Parking restrictions. Parking restrictions are used in the majority of plans to discourage automobile use in urban centers. Restrictions in the central business district can significantly reduce carbon monoxide levels. As a measure to discourage the commuter from using his vehicle, parking limitations can effectively reduce emissions during the rush hour and result in reduced oxidant concentrations later in the day. On-street parking regulations can also result in decreased congestion and reduced emissions due to improved traffic flow.

In most EPA proposals, all parking facilities on which the actual construction work had not begun by August 15, 1973, would have been subject to review. In response to comments received, this definition has been revised to exempt such facilities if the actual construction contract has been let by that date.

However, where a developer has undertaken to build a facility, whether individually or as part of a larger structure, but the actual construction contract has not yet been signed, review will still be required. It is EPA's judgment that the project in such circumstances will still be at an early enough stage so that review to determine the possibility of decreased use of single-passenger automobiles will still be justified. However, the Administrator also recognizes that such review may be unduly burdensome in particular cases, and comment on this point is particularly invited. If the comments indicate that a less restrictive definition is justified, the promulgated regulations will be amended accordingly.

Regulatory fees for mass transit augmentation. Several of the plans call for the imposition of regulatory fees on parking. In earlier Notices of Proposed Rulemaking, the Agency expressed some doubt about its authority to impose such fees. That legal question has been extensively reexamined, and EPA has now concluded that such a step is authorized by the statute. The transportation control measures promulgated today will require a significant change in the driving habits of the American people. The use of fees can help to bring that change about with a minimum of social disruption because of the wide latitude they leave to individual choice. Those whose needs or preferences are strongly in favor of using the single-passenger automobile may continue to do so, although at a somewhat higher cost; those who can easily adapt to the use of other modes of transport will have a financial

incentive to do so. Many public comments supported the adoption of such fees. In addition, the enforcement of such fees will be less difficult than some other measures. Finally, such fees will be used to support mass transit. Expansion of mass transit is essential if the disincentives to automobile use imposed by transportation control plans are to have the desired effect. Such a use of the proceeds will also greatly mitigate the potentially regressive nature of such fees.

In requiring the States and EPA to impose transportation controls where they are needed to meet air quality standards, the Congress imposed a regulatory task whose difficulty and complexity are virtually unparalleled. The legislative history shows that Congress fully recognized the magnitude of the problem. At the same time, the statute's description of the exact types of measures that may be imposed is extremely broad and general. In the face of this broad language, the Administrator concluded that the Congress intended him to impose the method of control that he determined was best able to achieve the purposes of the statute.

Carpool systems. Experience to date with carpool programs suggests that policies to encourage carpooling might double auto occupancy rates for downtown peak period work trips. If a 10 to 50 percent increase in auto occupancy is adopted as a realistic range of possible effects, the net effect of carpool policies on total urban area auto use might be a 5 to 10 percent reduction.

EPA is promulgating measures that provide computerized carpool matching programs and preferential carpool treatment programs. The matching program provides for the formation of carpools and the preferential treatment programs provide incentives such as free parking to encourage carpools. Under the measures included in some plants, disincentives such as parking space reduction or paid, rather than free parking, are included to discourage single occupancy on commuter trips.

Bus lanes. Bus priority treatment consists of allocating highway facilities preferentially to buses for the purpose of improving the quality of bus service. Methods of effecting bus priority treatment in the transportation plans include reserved lanes for buses (and/or carpools), preferential access for buses at freeway ramps, and certain traffic engineering improvements. The forms of bus lanes set forth in either the plans proposed or approved by the States or promulgated by EPA include normal bus flow lanes, and contra-flow lanes. In the case of California, the U.S. Department of Transportation suggested that dedicated freeways or major roads be used as an alternative to the bus lane approach. Based on comments received, EPA has determined that the bus lane concept is preferable in these promulgations.

The use of bus (and/or carpool) lanes has been observed to increase mass transit freeway speeds by a factor of two or more. Through the elimination of congestion problems, bus service dependability is increased as late arrivals are significantly reduced. Furthermore, bus ridership should increase, and the fares may eventually be reduced. Because of these factors, the regulations set forth for bus lanes are expected to be a positive inducement to increased bus patronage. The timetables for implementation of bus lanes will vary according to regional situations.

Heavy-duty vehicle restrictions. The economic fabric of this country's urban and suburban areas is dependent on an extensive and flexible system of truck deliveries to industrial and commercial establishments. At the same time, emissions from heavy-duty vehicles, which are almost exclusively trucks, are regulated far less stringently than those from passenger cars.

The degree of restriction on truck VMT consistent with the maintenance of a healthy economic structure in a region will vary greatly from city to city. In most instances, the potential for economic disruption combined with the low contribution of these trucks to total emissions caused EPA to reject such measures. In certain areas, however, it was determined that a restriction of truck operations to hours when their emissions are not likely to contribute to oxidant formation was practicable, and measures to accomplish this will be implemented.

Bikeways. America is enjoying an unprecedented boom in bicycle sales and useage. In 1972 bicycles outsold automobiles, 13 million to 11 million. Bicycle use has doubled in the past ten years.

A preliminary analysis by EPA suggests that increased use of bicycles in urban commuting could reduce VMT by 1 to 2 percent. Public comment in the course of this rulemaking also favored the increased use of bicycles.

At present the major obstacles to cycling are high accident rates, high bicycle theft rates, increased exposure to auto pollutants, and insufficient support facilities. The last problem tends to cause the previous three, and all of them could therefore be greatly alleviated by providing segregated bikeways and adequate support facilities.

Many regions affected by these promulgations intend both to expand their networks of such bikeways and to integrate them with mass transit facilities. EPA fully supports and encourages such programs.

Vehicle free zones. Traffic free zones are primarily promulgated to control local carbon monoxide problems. The zones are necessarily restricted in size (approximately ten blocks or less) in order to provide foot access. Consequently, the zones can be put into effect by 1975 since no additional transit facilities are required. Although increasing the size of the vehicle free zone tends to increase the potential air quality improvements, such action also increases the problem of access, circulation, and peripheral congestion and pollution.

Selective vehicle use prohibitions. In several regions, EPA proposed a regulation under which the vehicle population would have been divided into five categories. Each category of vehicles would have been required to display prominently a tag of a distinctive color; on one day of each working week vehicles marked with one such color would have been forbidden to operate.

Testimony at all the public hearings indicated that measures of this type so far proposed would be unenforceable because of their severeness and arbitrary nature. In addition, the number of additional enforcement personnel necessary to implement such a program would then have been so great as to preclude the reasonable availability of this measure. Were they to be implemented, many very workable methods of evading the requirements would doubtless be devised.

Inspection and maintenance. Considerable reductions in motor vehicle emissions can be achieved by requiring all vehicles in an area to be tested annually for emissions, and then requiring those vehicles that exceed a certain level to be serviced until they can pass the test. This process is called "inspection and maintenance" (I/M). If additional stationary source controls are not adequate to attain the standards, the Agency considered the implementation of inspection and maintenance measures as well as measures to reduce vehicle miles traveled.

Two different types of inspection programs have been promulgated: (1) an "idle test" program that measures emissions while the vehicle is running in neutral and (2) a "loaded test" program that measures emissions while the vehicle is running in gear on a treadmill-like device called a dynamometer. The effectiveness of these programs depends primarily upon the fraction of the vehicle population forced to obtain corrective maintenance. For example, a program of inspecting idle mode emissions is estimated to result in reduction of 11 percent for hydrocarbons (HC) and 10 percent for carbon monoxide (CO). These results assume that the standards set for the inspection are sufficiently stringent to assure that 50 percent of the vehicles tested would fail the test if no unusual maintenance were obtained prior to the inspection. This concept is generally referred to as an "initial failure rate" of 50 percent. (Of course, if such vehicles are maintained in anticipation of the inspection, they need not fail, and emissions will be reduced.) An initial failure rate of only 10 percent for an idle test provides reductions of 6 percent for HC and 3 percent for CO. A loaded mode inspection should provide a 15 percent HC and a 12 percent CO reduction at a 50 percent initial failure rate and an 8 percent HC and a 4 percent CO reduction at a 10 percent initial failure rate. These reductions are representative of an annual inspection program. If semiannual inspection programs are employed, additional reductions are expected.

Annual emissions inspection on State-operated lanes is estimated to cost less than $2 per vehicle. Maintenance costs observed in fleet studies of various I/M approaches have been found to lie in the range of $20 to $30 for those failing the inspection test. However, the annual

average maintenance cost to all vehicles subject to inspection is estimated to be about $3 per vehicle when the cost of maintenance that would normally have been performed voluntarily is netted out of the estimated maintenance cost.

If the State has adequate regulations to implement an I/M program by March of 1974, the State should be able to acquire necessary equipment, prepare facilities, train personnel, complete a pilot program, and be ready to begin an inspection cycle by May 1, 1975, for an idle test program and by August 1, 1975, for a loaded test program. Accordingly, a year's cycle could be completed and full credit taken for an I/M program by May 1, 1976, or August 1, 1976. These compliance dates represent approximately an 8- to 9-month delay of the inspection schedules previously proposed. The original schedule assumed the State could begin taking actions to set up inspection systems by summer 1974. Time extensions are thus generally required for the implementation of inspection and maintenance programs.

A few States, however, have either already begun implementing inspection and maintenance programs or have existing safety inspection lanes. The State of New Jersey already has an emission inspection program operating as does the City of Chicago. In other areas, such as Portland, Oregon, the State government has taken the initial steps to make an I/M program operational. EPA has thus used or accepted earlier completion dates in certain situations. The Agency has also used completion dates slightly later than those mentioned above for States that have already developed realistic implemention time schedules that require a limited amount of additional time.

Although no programs have been conducted to investigate the effect of inspection and maintenance on medium-duty vehicles (vehicles weighing from 6,000 to 10,000 pounds), these vehicles are similar to light-duty vehicles; engine design, operational characteristics, and maintenance habits are closely related to the average automobile. Thus, the Administrator has determined it is reasonable to predict similar effects for inspection and maintenance of medium-duty vehicles as have been discussed above for light-duty vehicles.

Retrofits. If additional stationary source controls, moderate VMT reductions, and implementation of inspection and maintenance cannot provide an adequate reduction to achieve the air quality standards, the Administrator considered the implementation of retrofit emission control measures. A retrofit measure can be defined as the addition of any device, system, modification, or adjustment made on a motor vehicle after its initial manufacture to achieve a reduction in emissions. The retrofit packages considered included: vacuum spark advance disconnect (VSAD) with lean idle; air bleed to the intake system; exhaust gas recirculation; oxidation catalyst for both medium- and heavy-duty vehicles.

Implementation of strategies employing these retrofit systems cannot be completed by May 31, 1975, and thus an extension is required for these strategies. Accordingly, as required by the Act, the Administrator considered and applied all measures available by May 31, 1975, before promulgating retrofit measures. It should also be noted that the implementation of an inspection and maintenance program accompanies the implementation of all retrofit measures owing to the need to keep the retrofit devices in good operating condition.

Vacuum spark advance disconnect (VSAD) with lean idle. Two basic engine modifications employed by the motor vehicle manufacturers in meeting Federal exhaust emissions standards have been the leaning of air/fuel ratios and the modification of ignition (spark) timing. The modification of these parameters in pre-controlled (pre-1968) vehicles similarly reduces exhaust emissions. Because 1968-and-newer vehicles have utilized these modifications to some extent to meet Federal emission standards, this retrofit technique is considered to be applicable only to pre-controlled vehicles. This judgment has recently been supported by difficulties the State of California has experienced with this retrofit on controlled vehicles. It is further recognized that this retrofit cannot be used on approximately 10 percent of pre-controlled vehicles that do not employ vacuum spark advance. This system will accomplish average emissions reductions per retrofitted vehicle of 25 percent for HC and 9 percent for CO.

The initial cost of purchase and installation of this system, which is commercially available, is estimated to be $20. Device maintenance can probably be limited to an annual readjustment of the idle air/fuel ratio and would cost about $5. The VSAD retrofit is considered the most cost-effective retrofit device.

The VSAD retrofit device is currently being used on over 800,000 vehicles in the United States and thus no further evaluation of its emission reduction potential or development is required. If necessary regulations are adopted by March of 1974, States can order and receive the devices, complete an installation training program and be prepared to begin installing the system by December of 1974. Installation of the device on all pre-controlled vehicles could be completed within a year and thus full implementation can take place by December of 1975.

Air bleed to the intake system. Many devices have been designed to introduce, by one means or another, excess air into the intake system of a vehicle. This is one way of reducing HC and CO levels. The reduction achieved varies with the amount of air allowed into the intake system. This technique is applicable to some extent to all light-duty vehicles, but because of the relatively lean air/fuel ratios on controlled vehicles the technique is only being promulgated for pre-controlled vehicles. Emission reductions of 21 percent for HC and 58 percent for CO are expected to result from the implementation of this measure. The installed cost of the air bleed system is estimated to be approximately $40 to $60. A fuel economy improvement of 4 percent associated with the use of this device would reduce operating costs by $1.20 per 1,000 miles of operation.

No air bleed device has been evaluated to the extent necessary to allow immediate implementation actions. It currently appears that substantial data on such systems will be available from EPA by November 1974. Allowing the States 2 months to review data on this device and to approve specific manufacturers, selection of an approved device should be completed by January 1975. Seven months for manufacturing, installation, and training and an additional 12 months for installation on the vehicle population would result in full implementation by August 1976.

Oxidation catalyst. Because of the automotive industry commitment to the use of catalysts in meeting future Federal emission standards, it follows that catalyst systems are being identified as retrofit candidates as well. Catalyst retrofits are applicable to cars capable of running properly and without excessive engine wear on a commercially-available, lead-free gasoline. Such lead-free gasoline will be commercially available by July 1, 1974, as a result of regulations promulgated by EPA on January 10, 1973. EPA's best estimate of the proportion of cars to which catalytic systems are applicable is 20 percent of pre-1971 and 75 percent of 1971–1974 model year vehicles.

The implementation of a strategy employing catalytic retrofits is expected to account for emissions reductions of 50 percent for HC and 50 percent for CO.

Estimates of the cost to be borne by the consumer for a catalyst retrofit package will vary according to the type and age of the consumer's vehicle, and the organizational structure selected for retrofit installation. With an installation program run in State-owned (or franchised) inspection and installation centers, the average initial cost would be approximately $125. However, with an installation program designed to make use of traditional distribution channels and local service establishments, the initial price could rise to well over $300. All retrofits, however, could be financed through a state or local tax program.

The catalytic retrofit device has not been evaluated to the extent necessary to allow immediate implementation action. Substantial data, on this device, however, should be available by the fall of 1974. This will allow time for the States to review these data, and approve a particular manufacturer's product. Orders for this device could probably be placed by January of 1975. From the time the order is placed until first installation will require 10 months because of the more extensive design and manufacturing requirements of the catalysts. Installation of a catalyst system is significantly more time consuming than for other retrofit strategies. (Three man-hours compared to less than 1 man-hour for air bleed.) To minimize the impact of

these installations on the service industry, 18 months have been estimated for installation on all qualified vehicles with full implementation by May 1977. If only fleet vehicles are retrofitted with catalysts, or if only one model year of vehicles is retrofitted with catalysts and 1968 or later models are retrofitted with other devices, catalyst retrofit installation could be completed within 12 months or by December of 1976.

In view of the high cost to the individual vehicle owner associated with catalytic retrofit devices and the long implementation time, the Administrator has promulgated this measure only after other available and applicable measures short of gasoline supply limitations were applied. Since the measure requires an 18- to 24-month extension—and, consequently, all other measures can be considered—catalytic retrofits are only promulgated for areas with severe air pollution problems.

In addition, consideration is being given to retrofit of gasoline-powered vehicles in the 6,000 to 14,000 pound class, commonly referred to a medium-duty (6,000 to 10,000 pounds) and heavy-duty (above 10,000 pounds). There is very limited application of these measures since they are presently being evaluated. Those regions that will implement these measures are active participants in this evaluation.

Gasoline supply limitations. Several of the proposed transportation controls included measures to limit the gasoline supply in certain areas in order to reduce vehicle miles traveled. The measure included two types of regulations: (1) a gasoline supply lid that would become effective in 1974 to limit the quantity of gasoline sold to fiscal 1973 levels; and (2) a regulation to be implemented on May 31, 1977, to reduce an area's gasoline supply, and thus VMT, to the extent necessary to achieve the standards.

The gasoline supply lid requirement has been dropped as a primary measure. The Act requires that all "reasonably available" measures must be implemented by May 31, 1975, before granting an extension. Based upon the comments received at the public hearings on this measure and the Agency's evaluation of the feasibility of implementing and administering successful gasoline supply limitations, the Administrator has determined that a gasoline supply lid cannot be considered "reasonably available." The possibilities of evasion, the likelihood of noncompliance, and the difficulty of enforcement are too great to make this measure practicable.

The gasoline supply reduction regulation to be implemented on May 31, 1977, however, has been retained in several plans. As was noted above, the Clean Air Act required air quality standards to be achieved by 1977 without regard to cost or social disorganization that may result as a by-product of achievement. If gasoline supply limitations are needed to achieve the standard, the "reasonableness" criterion is not a determining factor. Accordingly, the Administrator was obligated to use gasoline supply limitations as a final resort measure in certain areas with severe air pollution problems. Most of these areas required reductions in vehicle miles traveled far in excess of 10 to 20 percent. In some regions, however, the required VMT reductions may well be accomplished through the specified VMT reduction measures. Gasoline supply limitations were required in these areas only to assure the attainment of the standards by 1977. If a review of air quality data and VMT reduction monitoring information prior to 1977 indicates that the gasoline reduction measure is not required, supply limitations will not be implemented.

Legal Authority and Enforcement

In the complex field of transportation controls, States and other governmental entities have a special obligation to carry out and enforce implementation plans simply because Congress has placed that responsibility upon them. In a comparable situation, a Federal court has held that a county government and local sewage districts can be required, under implementation plans to control water pollution, to install sewage treatment facilities to handle the pollution created by individual citizens emitting pollution directly into a public body of water.

Many of the measures promulgated herein include requirements that Federal, State, or local units of government take specified actions to control air pollution from transportation systems. The Clean Air Act and its legislative history demonstrate that this was the intent of Congress. The approach of leaving primary responsibility for implementation at the State and local level is also made necessary by the nature of air pollution generated by millions of individual vehicles operating on an extensive network of public roads owned and administered by State and local governments.

The specific requirements imposed herein upon States and localities are based largely on two conclusions in addition to the factors discussed above: (1) that the governmental units must abide by valid implementation plan requirements just as much as any other source owners, and (2) that they are the owners and operators of pollution sources through their ownership and operation of highway transportation facilities.

The question has been raised in public comment whether governmental entities may be subject to Federal regulation and Federal enforcement under the Clean Air Act. There is no doubt that regulations may be applicable to such entities under the Act. Section 113 of the Act permits Federal enforcement of applicable implementation plans against "any person" who is in violation of "any requirement." Section 302(e) states, "When used in this Act * * * the term 'person' includes [a] * * * State, municipality and political subdivision of a State." Section 118 extends the requirement of obedience to such plans to Federal entities.

The question remains, what kinds of requirements must a State or other governmental entity comply with? The most obvious situation is one in which a State is operating a direct stationary pollution source such as a municipal incinerator. It is no less clear, however, that the Act allows the control of many kinds of direct and indirect sources relating to mobile pollution. Parking and road facilities constitute such sources and the control of them is a valid exercise of the authority in section 110(a)(2)(B) and 110(c) to promulgate such regulations as may be necessary to attain the national ambient air quality standards.

Transportation is a necessary service. In our society, the form in which it is provided depends overwhelmingly on the regulatory, taxing, and investment decisions made at all levels of government. By building and maintaining roads and highways, by licensing vehicles and operators, by providing a system of traffic laws, and in many other ways, government has encouraged the growth of automobile use to its present levels. There is nothing inevitable about such a choice. Governments could equally well have chosen to discharge their basic function of maintaining a transportation system in ways that would have discouraged the use of single-passenger automobiles, and encouraged the use of mass transit. But often they have not.

The production of food, electricity, and other consumer and industrial goods is as necessary in our society as transportation. In each case, the Clean Air Act authorizes regulations requiring such an activity, whether State or private, to be undertaken in the least polluting way in order to attain and maintain the air quality standards. There is no valid distinction between such production facilities and the State-owned automotive transportation facilities. In a comparable situation, the Supreme Court has held that State-owned rail transportation facilities must comply with Federal safety regulations.

A direct source of air pollution is one from which pollution is emitted directly into ambient air. Direct sources include not only automobiles and other vehicles, but also the facilities on which they are located during their operation—parking facilities and roads. Pollution is emitted directly into the ambient air from such facilities, and often the most feasible method of reducing it is by imposing restrictions on their owners and operators.

Many such facilities may also be viewed as indirect sources of air pollution. An indirect source is one that encourages mobile source pollution at locations not necessarily coincident with the source itself by serving as a trip attraction for automobile drivers, or which provides a parking or driving convenience. Thus, the availability of ample, low-cost parking facilities and high-speed freeways influences individuals to use vehicles with as few as one person in them, rather than less-polluting modes of transit. Such facilities may legitimately be charged not only with the pollution arising directly from their premises, but also with the total pollu-

tion in the region emitted by the traffic increase which they encourage.

For these reasons, the Administrator has concluded that regulations placing restrictions on parking and on the use of road space are essential to reduce the amount of air pollution generated by automobiles, and that they are valid exercises of EPA's regulatory authority.

The Administrator is also promulgating regulations requiring that vehicles allowed to operate on public roads be inspected or "retrofitted" with emission control equipment. Use of public roads by large numbers of publicly registered and regulated vehicles without either proper maintenance or adequate control equipment also causes damage to health. The requirement that the road owners and the licensing and regulating authorities prohibit such use is a reasonable means of preventing such damage.

Direct Federal enforcement and massive, duplicative Federal programs aimed at vehicles on an individual basis were not the means contemplated by the Act to solve these problems. It is clearly necessary that implementation of transportation control plans be carried out at the State and local level. The Chairman of the House Committee that reported out the amendments to the Act described their purpose as follows:

> If we left it all to the Federal Government, we would have about everybody on the payroll of the United States. We know this is not practical. Therefore, the Federal Government sets the standards, we tell the States what they must do and what standards they must meet. These standards must be put into effect by the communities and the States, and we expect them to have the means to do the actual enforcing.

Equally clear, however, is that the amendments of 1970 were designed to cure deficiencies that had resulted from total reliance upon state and local action to solve what was increasingly recognized as a national health problem. The regulations now being promulgated will provide the necessary assurance that such state and local action will be forthcoming.

Under section 113(a) (1) and (2) of the Act, the Administrator is authorized to issue orders and to bring civil actions or seek penalties. Although the legal authority to enforce these plans is clear, the primary effort—as is true for all implementation plans—will be directed toward working with the States both to develop and to implement effective strategies. This effort should continue even after these measures have been promulgated, so that all affected states eventually assume voluntarily the direct responsibility for enforcement of the plans.

In some instances, new regulations will be necessary on a State level. In others, existing regulations will be adequate. Where State-enacted Statutory authority is not adequate, the Clean Air Act and these regulations can provide the legal basis for programs at the State or local level.

As a matter of administrative convenience, a provision regarding violations and enforceability is being deleted from the regulations being promulgated for each State, and replaced by a general regulation covering these subjects which is applicable to all regulations promulgated under this part. No change in meaning or effect is intended by this change. Each of the regulations promulgated or approved is considered to be enforceable by the Agency, including all regulations requiring employers to provide mass transit priority incentives.

Summary of Approval/Promulgation Actions

Approval/promulgation actions presented in the initial group cover 16 separate air quality control regions (AQCR) found in 8 states. The actions taken in these 16 separate cases concerning transportation control plans are shown in Table 1. Air quality control regions or subregions are identified using the name of a key metropolitan area associated with the region. For example, the Texas portion of the Southern Louisiana-Southwest Texas interstate region is designated Beaumont. Preambles and regulations are provided separately for each State.

Table 1.—*Approved/promulgation summary*

	Region [1]
Plan fully approved in initial group:	
Minnesota: Minneapolis-St. Paul	1
Oregon: Portland	1
Ohio: Toledo, Dayton	2
Total	4
Plans requiring partial EPA promulgation:	
Colorado: Denver	1
Ohio: Cincinnati	1
Total	2
Plans requiring total EPA promulgation:	
Massachusetts: Boston, Springfield	2
Texas: San Antonio, Dallas-Fort Worth, Austin-Waco, Houston/Galveston, Corpus Christi, El Paso, Beaumont [2]	7
Total	9
Plan being reproposed for later promulgation:	
Indiana: Indianapolis	1
Grand total	16

[1] Air quality control region or portion thereof.

[2] Only stationary source controls are promulgated in this action.

Public Comment and Review

These promulgations of transportation controls and those to be promulgated within the next few weeks have involved ample opportunity for both written comment and oral testimony. However, the Administrator wishes to call attention to the fact that it is always appropriate for members of the public and affected interests to submit written comments on rulemaking actions even after the regulations have been promulgated. Accordingly, although these regulations become effective upon promulgation, interested persons are encouraged to submit written comments to the Administrator or the appropriate Regional Administrators for 30 additional days from the date of promulgation of the transportation control plan for each region. This does not affect the timetable for bringing any legal actions regarding these plans. Petitions for review may be filed in the United States Court of Appeals for the appropriate circuits within thirty days from the date of each promulgation or approval, pursuant to section 307 of the Act (42 U.S.C. 1857h–5(b)(1)).

This rulemaking is made pursuant to section 110(c) and 301(a) of the Clean Air Act (42 U.S.C. 1857c–5(c) (a) and 1857g).

Dated October 25, 1973.

Russell E. Train,
Administrator.

Part 52 of Chapter I, Title 40, is amended by adding § 52.23 as follows:

§ 52.23 Violation and enforcement.

Failure to comply with any provisions of this part shall render the person or Governmental entity so failing to comply in violation of a requirement of an applicable implementation plan and subject to enforcement action under Section 113 of the Clean Air Act. With regard to compliance schedules, a person or Governmental entity will be considered to have failed to comply with the requirements of this part if it fails to timely submit any required compliance schedule, if the compliance schedule when submitted does not contain each of the elements it is required to contain, or if the person or Governmental entity fails to comply with such schedule.

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PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

Promulgation of Texas Transportation Control Plan

Background

The State of Texas submitted a revision to the Texas Air Pollution Implementation Plan on April 15, 1973. Along with that submittal, the Governor of Texas requested an extension until 1977 for the attainment of the standard for photochemical oxidants in seven Texas Air Quality Control Regions. The State plan asserted that the 1975 ambient air quality standards would be met by May 31, 1975 by utilizing a stationary source strategy that would regulate reactive carbon compounds.

This plan was evaluated by EPA and on June 15, 1973, the plan was disapproved by the Administrator 38 FR 16562, 16568 (June 22, 1973). The plan was disapproved because principal portions or revisions of the control strategy and appropriate documentation were not made available for public inspection and public comment prior to the hearings on the plan. It was further determined that the material submitted by Texas, even if validly adopted, would not adequately ensure that the plan would meet the requirements of 40 CFR 51.14. On July 3, 1973, the Administrator proposed an

alternate control strategy for attaining and maintaining national standards for photochemical oxidants in Texas (38 FR 17799). That proposal further described specific deficiencies in the Texas plan. The document pointed out that the State control plan was inadequate because it was based on the control of stationary sources alone. The reduction model used by EPA showed that this control could not result in attainment of national ambient air quality standards without additional transportation control measures.

Public hearings were conducted by the Environmental Protection Agency in Dallas, Houston, San Antonio, El Paso, Austin, Corpus Christi, and Beaumont, Texas on July 17, 18, and 19, 1973. As a result of comments received during those public hearings and additional written comments submitted to EPA, certain changes have been made to the regulations as proposed.

AIR QUALITY AND EMISSION REDUCTIONS

EPA proposed a control strategy based on the reduction of reactive organic compound (hydrocarbon) emissions. The magnitude of the required reductions in emissions was determined on the basis of straight percentage rollback from the baseline oxidant air quality measurements in each region. See "Photochemical Oxidant Control Strategy Development For Critical Texas Air Quality Control Regions," prepared for EPA in 1973 by TRW, Inc. "Control Strategy," hereinafter). The Texas Air Control Board, in public testimony, has maintained that the model is incorrect because it assumes that a decrease in ozone is to be effected from each corresponding decrease in non-methane hydrocarbons. In the plan submitted on April 15, 1973, the State, using data from AP–84 (Air Quality Criteria for Nitrogen Oxides), had developed a reduction model relationship based on non-methane hydrocarbons. Using this relationship, the percent reduction required for reactive hydrocarbon emissions was significantly lower than the reduction required by straight percentage reduction. To estimate reductions in reactive hydrocarbons resulting from their strategy, the State separated reactive and non-reactive components in the hydrocarbon emission inventory. EPA has reviewed this model relationship and has determined that this reduction relationship should not be accepted as the appropriate reduction model and that in this case the appropriate reduction model should be the straight percentage rollback model.

The reduction relationship developed by the State presumes the non-existence of data at the "lower end" (below 0.3 ppm non-methane hydrocarbons) of the oxidant non-methane hydrocarbon relationship described in AP–84. In fact, data does exist in this range, but was not plotted due to low confidence levels resulting from the measurement technique employed (see Reference 8 of section 4, AP–84). Consideration of this "omitted" data could result in a reduction requirement model even more stringent than Appendix J (See Control Strategy, p. 1–3). The State has not considered these data in its submitted model. The Administrator, therefore, determined that the reduction relationship developed by the State should not be accepted as the appropriate reduction model. Appendix J, on the other hand, did not account for the utilization of a reactive hydrocarbon approach and also was not considered appropriate. Since a reduction in reactive hydrocarbons relates more closely to a subsequent reduction in oxidants, a reactive hydrocarbon strategy approach is desirable. In the absense of an adequate photochemical diffusion model, an appropriate relationship for use with a reactive hydrocarbon approach is straight percentage reduction. This technique is also being used in some other critical areas of the United States. Thus, the Administrator finds that in this case straight percentage rollback is the appropriate reduction model.

It is recognized that considerable controversy exists regarding the reduction model that should be used. It is apparent at this time, however, that at least the reductions indicated by the straight percentage rollback model will be necessary in the State of Texas. Should future data indicate that further reductions are necessary, the Administrator will propose additional measures beyond what are required in this control strategy. On the other hand, the Administrator recognizes that application of Texas' Regulation V for the control of volatile carbon compounds may achieve a greater reduction in the emission of reactive hydrocarbons than is now expected, as was indicated by the stationary source strategy submitted by the State of Texas. If, after promulgation of these regulations, the State of Texas provides data to the Administrator showing that photochemical oxidant levels are being reduced at a rate greater than now expected and that further implementation of these regulations is not necessary, all or a portion of the Federal plan will be rescinded.

The reactive hydrocarbon approach proposed by EPA was criticized by the State on the basis that the reactivity factors used were incorrect. EPA believes, however, that the procedures and reactivity data developed by the State of Texas to separate reactive carbon compounds from total hydrocarbon emissions for petroleum refining, chemical processes, and certain transportation categories were inconsistent with data that showed the relationship between reactive and non-reactive components for identical processes and sources in other areas of the country. Generally, the approach used by the State overestimated reactive emissions from petroleum refining, chemical processes, aircraft and diesel engines, and underestimated the reactive emissions from gasoline powered motor vehicles. Estimates for most other emission categories are consistent. Data available to EPA from two other areas of the country validate the reactivity factors used in EPA's Texas control strategy (See EPA Region VI Technical Support Document). The state emission inventory for total hydrocarbons and the procedure used to estimate the effects of Texas' Regulation V was determined to be adequate and with some updating and improvement, it was used directly in the development of the plan utilized by EPA, except for certain transportation categories (See EPA Region VI Technical Support Document).

The measurement method and ambient data base utilized by EPA also have been criticized because of the newness of instruments used to obtain the data. EPA has utilized the best available data. The data were obtained in an EPA study in the summer of 1971, in which State and local employees operated and calibrated the instruments used, and additional data were obtained from the Texas Air Control Board for 1972. On the basis of this best available information, EPA has determined the necessary reductions in oxidants that must be achieved in order to attain the national standard for photochemical oxidants.

The control plan developed by EPA has not been based primarily on the control of hydrocarbon emissions from mobile sources. In developing the plan, EPA looked first to the control of stationary sources and in fact utilized Texas' Regulation V for the control of such sources. In areas such as the Houston-Galveston Region, where stationary sources constitute the majority of hydrocarbon emissions, the control strategy acknowledged this fact, and 87 percent of the reductions is from these sources. Only in those areas where the reduction model used by EPA showed that control of stationary sources alone would not be adequate were mobile source reduction measures proposed and utilized in this promulgation.

Reductions required for six air quality control regions in Texas are discussed individually below. These reductions are based on straight percentage rollback from the baseline oxidant air quality measurements in that region.

AIR QUALITY CONTROL REGIONS IN TEXAS

There are seven air quality control regions in the State of Texas that have been classified priority I for photochemical oxidants. The regions are: AQCR 3 Austin-Waco; AQCR 5 Corpus Christi; AQCR 7 Houston-Galveston; AQCR 8 Dallas-Fort Worth; AQCR 9 San Antonio; AQCR 10 Southern Louisiana-Southeast Texas Interstate; AQCR 11 El Paso Interstate. The regulations herein promulgated are designed to attain and maintain the national ambient air quality standard for oxidant in six of the AQCR's cited in the May 31, 1972 FEDERAL REGISTER. However, as indicated in the July 3, 1973 FEDERAL REGISTER, it has been determined that the seventh region, AQCR 10, Southern Louisiana-Southeast Texas Interstate Region, will also require a modified control strategy for the control of hydrocarbon emissions. Due to the severe schedule limitations imposed upon the Administrator by the tight deadlines of the court order and the magnitude of other promulgations, a plan for controlling hydrocarbon

emissions in Texas' portion of the Southern Louisiana-Southeast Texas Interstate Region has not been fully completed for inclusion in this promulgation. Regulations will be proposed in the FEDERAL REGISTER and a hearing will be held for this AQCR after completion of a study that is now underway. However, it is the opinion of the Administrator that, as a minimum, control for limiting reactive hydrocarbon emissions from the stationary sources located there should be included as part of this promulgation. It has been determined that approximately 80 percent of the total hydrocarbon emissions in the Region result from stationary sources (see EPA Region VI Technical Support Document).

The standard to be achieved by this plan is the national ambient air quality standard for photochemical oxidants, which is 160 $\mu g/m^3$ (0.08 ppm) for photochemical oxidants, and the straight percentage rollback reduction model was used by EPA. At the time regulations were proposed, the second highest ozone measurement in Region 8 (Dallas-Fort Worth) was thought to be 0.125 ppm (38 FR 17800). This figure would have resulted in a 36 percent emission reduction being required. The second highest ozone measurement in Region 8 was actually 0.120 ppm, which indicates that a 34 percent emission reduction is required. (See EPA Region VI Technical Support Document). This change is reflected in the table below.

Region	2d highest O_3 measurement to date (ppm)	Percent emission reduction required
3	0.109	27
6	.184	56
7	.320	75
8	.120	34
9	.145	45
10	.341	77
11	.120	34

CONTROL STRATEGY TO REDUCE REACTIVE ORGANIC (HYDROCARBON) COMPOUNDS

The Administrator's analysis of the control strategies required to meet ambient air quality standards for oxidants included evaluation of additional stationary source controls in combination with mobile source controls. The control strategy proposed on July 3, 1973 for each air quality control region was based on the most promising combination for that particular region. In addition, efforts were made to incorporate the State plan, which was done, and to follow known State priorities and planning in setting forth additional proposals. The following is a summary of the measures that were originally proposed and of those now promulgated herein after receipt of additional review and public comments were received on the proposals.

STATIONARY SOURCES

EPA looked first to the reductions in emissions that might be achieved by further control of stationary sources. The states and EPA have had significant experience in enforcing similar measures. It can be predicted with confidence that none of these measures will cause any noticeable economic or social disruption even though some burden on individuals may result from them.

The Administrator originally proposed the following emission reduction measures applicable to stationary sources of reactive organic compound emission:

(1) The extended application of Texas' Regulation V to additional counties.

(2) Control of organic solvent evaporation.

(3) Control of evaporative losses from gasoline marketing operations, including control of evaporative losses at the stage when gasoline is loaded into the storage tanks at a service station or other distribution facility, and at the stage when gasoline is loaded into the individual vehicle.

(4) Control of barge and ship loading.

(5) Control of emissions of organic compounds from architectural coatings for buildings.

(6) Elimination of degreasing operations using trichloroethylene.

(7) Limitation of new reactive carbon compound emission sources.

Texas' present Regulation V, "Control of Air Pollution for Volatile Organic Compounds" is now applied to sixteen counties. Significant reduction may be obtained by applying this regulation to additional counties and the proposal to extend the regulation has been retained in this rule making. Very little public comment was addressed to the feasibility of extended applicability of Regulation V. Comments on this topic questioned the oxidant standard, rather than the necessity of utilizing Regulation V to achieve that standard.

Additional information now available indicates that proposed Items 2 and 5 may be eliminated as part of the control strategy required to meet ambient air quality standards for oxidants. The emissions of organic compounds from organic solvent evaporation and from architectural coatings for buildings contribute only a small portion of hydrocarbon emissions in the Houston-Galveston, San Antonio, and El Paso Air Quality Control Regions, where the regulation was proposed. Testimony received at public hearings shows that these regulations would not achieve substantial reductions, but would impose unnecessary burdens on the public. For these reasons the regulations regarding control of organic solvent evaporation and architectural coatings have been omitted.

EPA is currently of the opinion that the technology to control emissions associated with storage tank filling cannot be applied in full for all affected facilities until March 1, 1976, not until June 30, 1976 for 80 percent control of emissions from individual vehicles, and not until May 31, 1977 for 90 percent control for individual vehicles (See General Preamble). It is apparent however, that control devices will be available for a portion of the affected facilities by May 31, 1975. For this reason full implementation of this regulation is being required in the Texas portion of the El Paso-Las Cruces-Alamogordo Interstate Region and the Austin-Waco Intrastate Region by that date. There are approximately 15,080 service stations in Texas for which full vapor recovery systems will be required by these regulations. Of this number, approximately 770, or about 5 percent are located in the El Paso region. Certain manufacturers of the vapor recovery systems have indicated to EPA that their systems are available for marketing at this time and can be installed within a short period of time (See EPA Region VI Technical Support Document). There also is a readily available labor market in the El Paso area. Thus, it is believed that by making the El Paso region a priority area for the installation of vapor recovery systems and by directing all available resources within the State to that area, the systems may be fully installed and operative for all affected sources within the area by May 31, 1975. Similarly, in the Austin-Waco Air Quality Control Region there are approximately 2270 service stations; about 13 percent of the stations in the state that will be required to have partial vapor recovery by these regulations. Again, the equipment necessary to implement vapor recovery systems for tank loading is available in limited quantities and by directing all available resources to the Austin-Waco region, the installation of systems can be completed by May 31, 1975.

A study prepared for EPA in 1973 indicates that installation of necessary equipment can be accomplished by local contractors since the installation is typical of service station construction and repair and does not require specialized equipment. At an estimated installation time of less than a week per station from ground breaking to surface repair, and assuming a single contractor could handle five to ten installations per week, the total contractor requirement for El Paso would be about three individual contractors for the entire region and about seven for the Austin region. It is acknowledged that there could be some delay in supplying the above ground hardware, the special nozzles and return lines, due to a sudden demand placed on manufacturers, but it is believed that by placing priority on El Paso and the Austin-Waco area, this demand will be anticipated. See "Photochemical Oxidant Control Strategy Development for Critical Texas Air Quality Control Regions" (1973, TRW, Inc.), (hereinafter, "Control Strategy").

Some public testimony regarding gasoline marketing controls objected to the cost imposed upon owners or operators of retail gasoline stations. Data available to EPA, however, indicate that the full or partial vapor recovery system is one of the most cost effective measures available. See "The Clean Act and Transportation Controls (An EPA White Paper, August, 1973)" (hereinafter, "EPA White Paper"); "Systems and Costs to Control Hydrocarbon Emissions From Stationary Sources" (EPA 1973). The

prevention of gasoline loss by means of vapor recovery systems allows the cost of the system to be recovered over a period of time.

At the present time there are no regulations controlling reactive organic compound emissions resulting from the loading of barges and ships in Texas. Technology is available which, if applied, would substantially reduce the emissions, Public testimony objecting to EPA's proposals for the application of such technology raised the issue of jurisdiction over ships and barges. Some commentators suggested that the United States Coast Guard should have sole jurisdiction over all ships and barges. EPA believes, however, that it has jurisdiction over all sources of air pollution under the authority of the Clean Air Act, and that with the cooperation of the Coast Guard it may control reactive hydrocarbon emissions from ships and barges. The proposed regulation thus has been retained in this final rule making.

The regulation requiring control of degreasing operations by eliminating the use of trichloroethylene (TCE) has been amended to allow continued use of TCE where appropriate controls are utilized. This change is based on public comments indicating that in some instances continued use of trichloroethylene is preferable and that the use of control devices will achieve similar results.

A permit system was proposed to control growth of industries emitting reactive organic compounds in Air Quality Control Regions where excessive industrial development will prevent the attainment and maintenance of air quality standards. Comments on this regulation concerned the validity of the oxidant standard, rather than the necessity of the regulation to meet the standard. As stated above, it is EPA's view that this measure is necessary to achieve the 0.08 ppm photochemical oxidant standard and it has thus been retained in final regulations.

In summary, EPA is now promulgating the following regulations for the control of reactive carbon compound emissions from stationary sources:

(1) The extended application of Texas' Regulation V to additional counties, fully implemented by 1975.

(2) Control of evaporative losses from gasoline marketing operations: (a) At the stage when gasoline is loaded into the storage tanks at a service station, fully implemented by 1975 AQCR's 3 and 11 and by 1976 in AQCR's 7, 8, and 9; and (b) at the stage when gasoline is transferred from the filling pump to the vehicle talk, fully implemented by 1975 in AQCR 11, by 1976 AQCR 8, and by 1977 in AQCR's 7 and 9.

(3) Control of barge and ship loading, fully implemented by 1975.

(4) Control of degreasing operations using trichloroethylene, fully implemented by 1975.

(5) Limitation of new reactive carbon compound emissions sources, fully implemented by 1975.

EPA is promulgating Item 1 above for Corpus Christi, Items 1 and 2–a for Austin-Waco, Items 2–a, and 2–b for El Paso, Items 1, 2–a and 2–b for Dallas-Fort Worth, Items 2–a, 2–b, and 4 for San Antonio, and all Items for the Houston-Galveston Region.

Mobile Sources

The Administrator proposed various emission reduction measures applicable to mobile sources of reactive organic compound emissions. The proposed measures and amendments made since the time of proopsal are discussed below:

(1) *Aircraft.* Emissions will be reduced due to turnover in aircraft populations. Calculations of emission reductions to be achieved by these measures have not changed since the original proposal. The reductions to be achieved by these measures were estimated at a conservative level (See EPA Region VI Technical Support Document).

(2) *Vehicles.* The controls proposed for vehicles can be divided into controls designed to reduce emissions per mile from vehicles currently in use and those designed to reduce the total number of vehicle miles traveled (VMT) in a region.

(a) *Emissions per mile.* Two measures in this category were proposed. The first is inspection and maintenance. Under it, the State will be required to test all vehicles in an area annually in a way that indicates their emission, fail those vehicles that exceed a certain emission level, and then require these vehicles to have maintenance performed in order to comply. The emission inspection procedure, which involves measuring the emissions while the vehicle is running in neutral, is called an "idle mode test". Automobiles so tested will be expected to meet emission requirements designed for the year and model of the automobile.

If the program criteria are properly designed, a reduction of 8 percent in reactive hydrocarbon emissions from light duty vehicles can be obtained in 1976. Comments have been received suggesting that a greater percentage reduction in reactive hydrocarbon emissions should be achieved. The regulations provide that the criteria will be tightened to achieve an 11 percent reduction in 1977 if the ambient standards have not been met.

The second measure involves retrofit of pre-1968 light duty vehicles in a region with a relatively simple emission control device called "vacuum spark advance disconnect."

The first of these measures were proposed for El Paso, San Antonio, Dallas, and Houston. It was further proposed that an inspection and maintenance program could be fully implemented by the State by May 31, 1975. It is now believed that the State cannot fully implement the program until May 1, 1976. Accordingly, an extension has been granted for those Regions where an inspection and maintenance program is necessary and the regulation has been amended to extend to May 31, 1976 as the date by which the State must be in full compliance with the regulation. The Attorney General for the State of Texas has issued an opinion maintaining that the Texas Air Control Board does not have the statutory authority to operate an automobile inspection and maintenance program. It is unclear at this time whether the Texas Department of Public Safety has authority for such a program as a part of its annual safety inspection program. However, promulgation of these Federal regulations as a part of the State Implementation Plan can authorize the State of Texas to proceed with implementation of the required inspection and maintenance program. The El Paso region has been eliminated from this regulation. It was determined that the standard could be achieved by 1975 by means of other measures.

Based on testimony received during the public hearing, additional changes were considered. The proposed regulation required that light duty vehicles obtaining a Texas Department of Public Safety inspection sticker must first pass an emissions test called an "idle mode test." Some citizens suggested a program in which, before a license plate is issued by the State, every vehicle owner must certify that this vehicle has been maintained according to the manufacturer's recommendations. This proposal would eliminate mandatory inspection for all vehicles. The certification would be enforced by "spot checks" and by requiring maintenance on those vehicles that failed the test. Evaluation of this proposal, however, showed that all vehicles would require maintenance before license plates could be issued. Otherwise, the vehicle owner could not truthfully certify that recommended maintenance had been performed. This would increase the total expense to all motorists over a full inspection program. Thus, the original proposal for inspection and maintenance was retained as it would require no certification of maintenance, and actual maintenance only on those vehicles failing the emission test. An additional measure has been included in this promulgation, however, that will require the State to monitor the effects of the inspection and maintenance program and retrofitting devices.

The requirement for retrofitting of pre-1968 light duty vehicles was proposed for Dallas-Fort Worth, San Antonio, and Houston-Galveston. It is the belief of the Administrator that implementation of this regulation would impose an unnecessarily onerous burden upon the poor, who own a significant percentage of pre-1968 automobiles in that region. Per capita income data shows that San Antonio had a per capita income in 1970 of $2,845, or 82 percent of the national average. This is compared to per capita income in Houston, $3,571 (103 percent of national average), Washington, D.C., $4,170 (120 percent of national average), and Los Angeles, $4,403 (127 percent of national average). See "Populational and Economic Activity in the U.S. and Standard Metropolitan Statistical Areas" (EPA/HUD). Poverty level figures also reflect the relatively low income status of San Antonio. Nationally, persons in the under $5,000 per year income range own approximately 27 percent of the pre-1968 vehicles. While exact percentages on San

Antonio are not available at this time, the above described income levels indicate that the 27 percent figure probably is low for San Antonio (See EPA Region VI Technical Support Document).

The retrofitting proposal also was eliminated in the Dallas-Fort Worth Region. It is not available prior to the attainment date granted the Dallas-Fort Worth Region to fully implement the vapor recovery regulations by 1976.

(b) *Vehicle restraints.* In the Houston-Galveston, San Antonio, and Dallas-Fort Worth Region the measures set forth above will not be sufficient to achieve the standard by 1975. The Administrator is granting extensions of time to these Regions under section 110 (c) of the Clean Air Act. The Act provides that no such extension may be granted unless all control measures which are reasonably available by May 31, 1975, are applied by that date. Accordingly the Administrator originally proposed the following measures for application to Houston and San Antonio; only the first two measures were proposed for Dallas.

(i) The conversion of motor vehicle lanes on major streets and freeways to the exclusive use of buses and carpools.

(ii) A limit on the construction of new parking facilities.

(iii) Limitations on the future growth of gasoline sales above current levels.

Final regulations require only the first item for Dallas and San Antonio and all three items for Houston-Galveston (with some changes). Carpooling measures to reduce VMT have replaced the second item for Dallas and San Antonio. EPA has evaluated a large number of measures to reduce emissions from mobile sources, including not only those included in the original proposal, but also additional measures. It has been determined that only those measures described below are practicable at this time in Texas.

The proposed regulation for preferential treatment of bus and carpool lanes required that all six- and eight-lane streets or highways in the affected areas would have preferential bus and carpool lanes. For purpose of clarity, the regulation has been amended to require preferential bus and carpool lanes in specific traffic flow corridors of major metropolitan areas. The governmental entity having jurisdiction over the roads is required to stipulate the specific streets on which lanes will be reserved, or streets that will be reserved wholly for buses and carpools, and to submit timetables indicating when the specified lanes and/or streets will be converted to preferential use, according to deadlines specified in the regulations.

The proposed regulation requiring a permit for new parking facilities applied to all parking facilities, regardless of size. In response to public comment which pointed out that the regulation would be applicable even to individual residential parking facilities, the requirement has been amended to include only those facilities that could have a significant impact upon vehicle miles traveled in a given area. As promulgated, the regulation will cover only parking facilities for five hundred or more automobiles.

Additional vehicle restraints are included in the final regulations that were not among the proposed regulations. As indicated in the July 3, 1973 FEDERAL REGISTER, the Administrator has been continuing to study additional reasonably available measures that will result in reduction of vehicle miles traveled by automobiles. By the regulations promulgated herein, the Administrator is approving a two-year extension of time in San Antonio and Houston-Galveston and a one-year extension in Dallas-Fort Worth under section 110(e) of the Clean Air Act. The Act, however, requires that all control measures that are reasonably available must be applied by May 31, 1975. Accordingly, additional measures that have come to the attention of the Administrator and that are reasonably available in the affected areas are included in this promulgation. The first of these measures is a bus and carpool incentive and promotion program that will require all private and public employers of 1000 or more employees in one location to provide incentives to those employees that will encourage them either to ride to work in carpools or to ride the bus. The second measure requires the State or approved local agencies to provide a computerized carpool service for employees working in the central business districts of Dallas, Fort Worth, San Antonio, and Houston. By this means the forming of carpools may be facilitated and the number of vehicle miles travelled by individual automobiles can be reduced. The Region VI office of EPA will provide assistance to the State or local agencies in preparing applications for Federal funds to implement the computerized carpool program.

Testimony received at the public hearings, however, revealed that a number of major metropolitan areas in Texas already have developed extensive traffic flow plans, soon to be implemented in those areas, that are similar to the measures proposed by EPA. In order to accommodate and utilize local planning where possible, EPA strongly encourages the use of local plans, and the regulations have been amended to accommodate such plans where possible. The regulations now provide that, if it is demonstrated that local plans will achieve reductions equivalent to those proposed by EPA and these plans are submitted by the State of Texas to EPA by December 1, 1973, these plans will be utilized for all or part of the VMT reduction measures, if approved by the Administrator. If such plans are not submitted or not approved, EPA regulations will continue to be effective.

Representatives of the cities of San Antonio, El Paso, Galveston, Houston, Fort Worth, and Dallas have met individually with the EPA Regional Office to discuss transportation measures that have been implemented by the cities and the plans to which the cities are committed and that will be accomplished within the next two to four years. Full details on the individual city plans and/or the VMT reductions that will be achieved by each plan are not available at this time. City representatives have indicated, however, that the cities are concentrating on emission reductions through traffic flow improvements such as computerized traffic signals, city-run vehicle inspection programs, upgrading of existing bus systems, satellite parking, limiting off-street parking to some extent, and general traffic flow improvements. The respective cities have indicated their intention to submit these plans to the Texas Air Control Board for inclusion in the State Implementation Plan.

In summary, EPA is now promulgating the following regulations for the control of reactive carbon compound emissions from mobile sources:

(1) Vehicle inspection and maintenance programs, fully implemented by 1976.

(2) Retrofitting of pre-1968 light duty vehicles, fully implemented by 1976.

(3) Conversion of motor vehicle lanes on major streets and freeways to the exclusive use of buses and carpools, fully implemented by 1976.

(4) A limit on the construction of parking facilities, effective August 15, 1973.

(5) Limitations on gasoline sales, conditionally effective in 1977.

(6) Requirements for bus and carpool incentives, fully implemented by 1975.

(7) Requirements for computerized carpool systems, fully implemented by 1975.

None of these items are required for the Austin-Waco, Corpus Christi, or El Paso AQCR's. Items 3, 6, and 7 are required for the Dallas-Fort Worth AQCR. Items 1, 3, 5, 6, and 7 are required for the San Antonio AQCR. All items are required for the Houston-Galveston AQCR. State or local plans may substitute for any of these items.

The capital costs for recovering vapors emitted during gasoline transfer from tank truck to service station is estimated to be just under $2,000 per station, which includes modification of bulk terminals. The annual operating cost for this phase of service station vapor controls is estimated to be ½ cents per gallon pumped. It is not known how much of this cost, if any, will be passed on to car owners. Car owners can expect to pay from $3 to $5 per vehicle per year for an annual idle inspection, depending on whether the inspection is state operated or operated through a franchise. The average maintenance cost for failed vehicles is expected to be about $25. Owners of vehicles that require a VSAD/LIAF retrofit can expect to pay about $20 for the device, which includes installation. Accurate cost estimates for marking bus/carpool lanes and installing signs are not available at this time. For additional information see Control Strategy; Systems and Costs to Control Hydrocarbon Emissions From Stationary Sources; EPA Region VI Technical Support Document.

AQCR 3—AUSTIN-WACO

AQCR 3 encompasses 24,633 square miles in 29 counties located in the central section of the State. The AQCR 3 counties are: Bastrop, Bell, Blanco, Bosque, Brazos, Burleson, Burnet, Caldwell, Coryell, Falls, Fayette, Freestone, Grimes, Hamilton, Hays, Hill, Lampasas, Lee, Leon, Limestone, Llano, McLennan, Madison, Milan, Mills, Robertson, Travis, Washington, and Williamson.

The second highest one-hour oxidant measurement in AQCR 3 is 0.109 ppm and was recorded in 1971. Based on the linear rollback procedure described in this proposal, this level requires a reactive carbon compound emission reduction of 26.6 percent from 1971 levels to meet the ambient air quality standard. Present stationary source regulations and Federal motor vehicle controls will provide a reduction of approximately 19.4 percent by 1975. An additional 3.8 percent reduction will result from an extension of Texas' Regulation V to Bell and McLennan Counties. An additional 4.9 percent will be accomplished by a vapor recovery system on gasoline storage tanks for all retail gasoline sales outlets, and aircraft emission reductions due to Federal standards which limit emissions from aircraft engines (See Control Strategy).

Regulations for the Austin-Waco Region essentially are the same as proposed. All measures for AQCR 3 shall be fully implemented by May 31, 1975.

Control of evaporative losses from gasoline marketing operations at the stage when gasoline is loaded into the storage tanks at service stations or other distribution facilities was proposed for the Austin-Waco Region and is included in final regulations. Whereas extensions have been granted for various other Regions to fully implement this regulation, it has been determined that sufficient equipment necessary will be available to implement this regulation in the Austin-Waco Region by May 31, 1975. Implementation of this regulation by 1975 will obviate the necessity of an extension for the Austin-Waco Region beyond the attainment date and thus, additional measures, such as reductions in vehicle miles travelled, will not be required.

Public transit, however, is important to the transportation needs and air quality in the region. The Administrator continues to encourage efforts to improve transit service in Austin and Waco.

The baseline emission inventory is tabulated by major source category in Table 3–1. The emissions reductions for 1975, projected on the basis of the measures described above, are summarized in Table 3–2.

AQCR 5—CORPUS CHRISTI-VICTORIA

The Corpus Christi-Victoria AQCR covers most of the South Texas coastal region. It is composed of 18 counties: Aransas, Bee, Brooks, Calhoun, DeWitt, Duval, Goliad, Jackson, Jim Wells, Kenedy, Kleberg, Lavaca, Live Oak, McMullen, Nueces, Refugio, San Patricio, and Victoria. Fifty-two percent of the population of the AQCR is located within the Corpus Christi Standard Metropolitan Statistical Area which represents 9 percent of the land area.

The region is flat to rolling hills with a rise in altitude from the coastal plains at sea level to approximately 250 feet in the northern sector. While there is ample sunshine to aid the formation of photochemical smog, the region is geographically open and the prevailing Gulf winds provide ventilation of the region.

TABLE 3-1.—*AQCR 3 (Austin-Waco) emission inventory*

[Tons per year]

Source category	1971 [1]	1975
Stationary sources:		
Area sources	707	840
Chemical processing	2,681	2,870
Petroleum refining and petrochem	0	0
Other processing	833	796
Transportation sources:		
Gasoline-powered motor vehicles	47,992	34,176
Diesel-powered motor vehicles	441	510
Aircraft	5,342	5,206
Gasoline marketing	4,405	5,421
Other transportation [2]	4,085	3,830
Total	66,576	53,658
Percent reduction from baseline year resulting from present controls		19.4

[1] Baseline year.
[2] Off-highway fuel usage (farm, construction, etc.), vessels, and railroads.

TABLE 3-2—*AQCR 3 Emissions Reductions from 1971 Levels—Under Strategy for 1975*

Control measure:	*1975 (tons per year)*
Present controls, including Federal motor vehicle controls	12,918
Extension of regulation V to Bell and McLennan Counties	2,544
Gasoline marketing service station storage tank vapor return	2,496
Aircraft emission control	750
Total	18,708

Baseline emissions: 66,576 tons per year.
Required percent reduction: 26.6 percent.
Required emission reduction by 1975: 17,976 tons per year.

During the summer studies of 1971, the second highest one-hour oxidant measurement in AQCR 5 was 0.184 ppm. Straight percentage rollback requires a reduction of approximately 56 percent from 1971 levels of projected emissions of reactive organic compounds to achieve the national primary ambient air quality standard for photochemical oxidants.

The Administrator is requiring control of stationary sources which in combination with the Federal emission standards for new vehicles will be adequate to meet the ambient air quality standard by May 31, 1975. The required stationary source controls, which are identical to the Texas Plan revision, are applications of Texas' Regulation V in Aransas, Calhoun, Nueces, San Patricio, and Victoria counties. Regulations for the Corpus Christi-Victoria Region essentially are the same as proposed. Transportation controls are not required in this region (See Control Strategy).

Public transit is important to the transportation needs and air quality in the region. The Administrator encourages efforts to improve transit service in Corpus Christi and will make every possible effort to assure that any Federally-funded transit modernization program is carried out.

Table 5–1 is a summary of the effect of the strategy on the reactive organic compound emissions.

TABLE 5-1.—*AQCR 5 (Corpus Christi-Victoria) emission inventory*

[Tons per year]

Source category	1971 [1]	1975
Stationary sources:		
Area sources	395	408
Chemical processing	78,995	10,810
Petroleum refining and petrochem	1,615	170
Other processing	46	46
Ship and barge loading	2,697	2,787
Transportation sources:		
Gasoline-powered motor vehicles	28,714	16,293
Diesel-powered motor vehicles	214	225
Aircraft	6,680	6,936
Gasoline marketing	2,399	2,899
Other transportation [2]	2,486	2,407
Total	119,151	42,063
Percent reduction from baseline year resulting from present controls		64.2

[1] Baseline year.
[2] Off-highway fuel usage (farm, construction, etc.), vessels, and railroads.

NOTE.—Required reduction: 56 percent.

AQCR 7—HOUSTON-GALVESTON

The Houston-Galveston AQCR is located on the coastal plains in the southeastern part of Texas. It is composed of Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, and Wharton counties.

Ninety-four percent of the population of the AQCR resides in the Houston and Galveston Standard Metropolitan Statistical Areas. The entire land area of the Region is very flat with no characteristic geomorphic features. Altitude varies from sea level on the coast to a maximum of 450 feet in Walker County to the north.

The second highest one-hour oxidant measurement in the Region is 0.32 ppm (measured in 1972). Based on straight percentage rollback, this level requires a reactive organic compound emission reduction of 75 percent from 1972 levels to meet the national ambient air quality standard for photochemical oxidants. To fully meet the requirements of the Clean Air Act by May 31, 1975, in Texas would require about 32 percent VMT reduction. However, it is the opinion of the Administrator that a reduction of 32 percent in VMT by 1975 to be achieved by limiting gasoline sales would be socially disruptive. Vehicle miles traveled cannot be practicably reduced by the required amounts before 1977. Therefore, the Administrator is requiring an alternate control strategy, which will allow substantial economic savings, that shall be fully implemented by May 31, 1977. The alternate strategy consists of the present stationary source regulations and Federal motor vehicle controls which provide a reduction of 65.4 percent by 1977, and the remaining 10 percent reduction can be attained by applying the following meas-

ures (See Control Strategy and EPA Region VI Technical Support Documents):

(1) Additional effect of Federal motor vehicle controls.

(2) Vapor recovery from all gasoline outlets, including vapor return from vehicle tanks.

(3) An inspection and maintenance program for light duty vehicles.

(4) Control of emissions from barge and ship loadings of reactive carbon compounds.

(5) Retrofitting of pre-1968 light duty vehicles utilizing VSAD/LIAF.

(6) Setting aside of motor vehicle lanes on major streets and highways for the exclusive use of buses and carpools.

(7) Limitations on gasoline sales, conditionally effective in 1977.

(8) Review of future construction of vehicle parking facilities.

(9) A computerized carpool program, and

(10) Carpool and bus incentives provided by employers.

Several regulations that were proposed on July 3, 1973 for the Houston-Galveston Region are not a part of this regulation. A regulation for control of organic solvent evaporation and architectural coatings for buildings proposed for the Houston-Galveston Region has been omitted. This regulation resulted in only a small proportion of reductions required for the Region and was not found to be practicable, as stated above in this preamble. In addition, it is believed that similar reductions may be obtained without utilizing the proposed regulation for the control of solvent evaporation (See EPA Region VI Technical Support Document).

Proposed regulations for limitation of gasoline sales also have been amended. The proposals required that the State of Texas prohibit the delivery to retail outlets of more than 100 percent of the gasoline delivered to outlets during the 1972–73 base year. Public testimony has indicated that allowing no growth above the 1972–73 base year may be socially disruptive. On this basis, the regulation requiring limitations on gasoline sales was reevaluated. It was determined that gasoline limitations should be used only in the event that the standards cannot be achieved by any other measures. The regulation thus was amended to limit gasoline sales to whatever levels may be necessary to achieve the oxidant level, but only if the oxidant standard cannot be achieved by other measures by 1977.

Additional vehicle restraints are included in the final regulations that were not among the proposed regulations. As indicated in the July 3, 1973, FEDERAL REGISTER, the Administrator has been continuing to study additional reasonably available measures that will result in reduction of vehicle miles traveled by automobiles. By the regulations promulgated herein, the Administrator is approving a two-year extension of time in the Houston-Galveston Region under section 110(e) of the Clean Air Act. The Act, however, requires that all control measures that are reasonably available must be applied by May 31, 1975. Accordingly, additional measures that have come to the attention of the Administrator and that are reasonably available in the affected areas are included in this promulgation. The first of these measures is a bus and carpool incentive and promotion program that will require all private and public employers of 1,000 or more employees in one location to provide incentives to those employees that will encourage them either to ride to work in carpools or to ride the bus. The second measure requires State or approved local agencies to provide a computerized carpool service for employees working in the central business district of Houston. By this means the forming of carpools may be facilitated and the number of vehicle miles traveled by individual automobiles can be reduced. It is now believed that these measures and those described below will be all necessary to attain the oxidant standard. If it becomes apparent, however, that further reductions will be necessary, the Administrator will propose additional regulations.

The proposed regulation for preferential use of certain highway lanes for buses and carpools has been amended to provide more clarity. As promulgated, the regulation specifies traffic flow corridors from around the city into the central business district of Houston, the major metropolitan area in the AQCR. The governmental entity having jurisdiction over the roads within each corridor will be required to specify certain lanes and/or streets that will be designed for the specific use of buses and carpools. The corridors specified for Houston encompass approximately 60 miles of roadway.

Testimony received at the public hearings shows that retrofitting devices and use of preferential bus and carpool lanes are opposed by some members of the public because of practical considerations rather than because of the efficiency of the regulations in meeting the standards. The testimony revealed, however, that some of the cities in the Houston-Galveston Region have developed extensive traffic flow plans. Subsequent information submitted by the cities suggests that the plans, soon to be implemented in those areas, would achieve reductions equivalent to the measures proposed by EPA. In order to accommodate and utilize local planning where possible EPA strongly encourages the use of these local plans. Thus, the regulations have been amended to accommodate the plans where possible. If it is demonstrated that local plans will achieve reductions equivalent to those proposed by EPA and these plans are submitted by the State of Texas to EPA by December 1, 1973, those plans will be utilized for all or part of the measures proposed for the Houston-Galveston Region if approved by the Administrator. If such plans are not submitted or not approved, EPA regulations will continue to be effective.

For additional information on transportation measures used in the Houston-Galveston Region see "Transportation Control Strategy Development for the Greater Houston Area" prepared for EPA in 1972 by TRW, Inc.

The baseline emission inventory which includes the effects of Texas' Regulation V and Federal motor vehicle controls is tabulated by major categories in Table 7–1. The emission inventory reductions for 1975 and 1977 projected on the basis of control strategies described above are summarized in Table 7–2.

TABLE 7-1.—*AQCR 7 (Houston-Galveston) emission inventory*

[Tons per year]

Source category	1972[1]	1975	
Stationary sources:			
Area sources	5,872	6,211	----------
Chemical processing	257,417	33,578	37,384
Petroleum refining and petrochem	17,064	1,561	----------
Other processing	2,526	983	----------
Ship and barge loading	11,444	12,000	12,778
Transportation sources:			
Gasoline-powered motor vehicles	83,620	67,977	52,976
Diesel-powered motor vehicles	870	980	----------
Aircraft	5,813	5,491	----------
Gasoline marketing	10,615	12,316	13,522
Other Transportation[2]	6,486	6,709	----------
Total	401,727	147,806	139,063
Percent reduction from baseline year resulting from present controls		63.2	----------

[1] Baseline year.
[2] Off-highway fuel usage (farm, construction, etc.), vessels, and railroads.

TABLE 7-2.—*AQCR 7 emission reductions from 1972 levels—under strategy*

Control measures:	*1977 (tons per year)*
Present controls, including Federal motor vehicle controls	262,664
Area source regulations	2,433
Gasoline marketing:	
Full vapor recovery from service stations, including vapor return from motor vehicles for one-half of the service stations in the AQCR	11,411
Aircraft emission controls	1,875
In-use vehicle strategies inspection/maintenance and BSAD/LIAF retrofit of light-duty vehicles	6,230
VMT reduction	2,114
Ship and barge loading controls	10,800
Limitation of additional industrial growth	4,716
Total	302,243

Baseline emissions: 401,727 tons per year.
Required percent reduction: 75 percent.
Required emission reduction by 1975: 301,295 tons per year.

AQCR 8—DALLAS-FORT WORTH

The Dallas-Fort Worth AQCR is composed of 19 counties: Collin, Cooke, Dallas, Denton, Ellis, Erath, Fannin, Grayson, Hood, Hunt, Johnson, Kaufman, Navarro, Palo Pinto, Parker, Rockwell, Somervell, Tarrant, and Wise. According to the 1970 census, approximately 78 percent of the people residing in this Region live in Dallas and Tarrant counties.

The terrain is composed of rolling hills and prairie with many wooded streams. The vertical relief of the area extends from 400 feet (MSL) in Navarro County

to 1,300 feet (MSL) in the northwest. Winds are generally characterized by a prevailing southerly direction with occasional northerly winds during the winter months.

The second highest one-hour oxidant measurement in the Region is 0.120 ppm (measured in 1971). The proposed regulations were based on an erroneously recorded measurement of 0.125 ppm (See EPA Region VI Technical Support Document). Based on a straight percentage rollback, the original figure required a reactive organic compound emission reduction of 36 percent from 1971 levels to meet the national ambient air quality standard for photochemical oxidants. The corrected figure, 0.120 ppm, based on straight percentage rollback, requires a reduction of 34 percent.

Present stationary source regulations and Federal motor vehicle controls will provide a reduction of 22.1 percent by 1975. The remaining 11.9 percent by 1976 can be attained by the following measures:

(1) Additional effects of Federal motor vehicle controls.

(2) The extension of Texas Regulation V to Tarrant County.

(3) Control of evaporative losses from the filling of storage vessels.

(4) Control of evaporative losses from the filling of vehicular tanks.

(5) Preferential bus and carpool lanes on certain major streets.

(6) A computerized carpool system.

(7) Bus and carpool incentives provided by employers.

The proposed regulation to limit the construction of new parking facilities has been replaced by other VMT reduction measures.

The proposed regulation for the control of degreasing operations using trichloroethylene has been eliminated for similar reasons. The control measure achieves only a relatively small reduction in hydrocarbons and the standard can be expeditiously met without the use of this control measure. Additional time will be necessary, however, in order to fully implement regulations for the control of evaporative losses from the filling of storage vessels and from the filling of vehicular tanks. Estimates now available to EPA show that the equipment necessary for all affected AQCR's to implement this program will not be available by 1975. Accordingly, the Administrator has granted an extension from the Dallas-Fort Worth Region until June 30, 1976 for attainment of the standard.

Additional vehicle restraints are included in the final regulations that were not among the proposed regulations. As indicated in the July 3, 1973, FEDERAL REGISTER, the Administrator has been continuing to study additional reasonably available measures that will result in reduction of vehicle miles traveled by automobiles. By the regulations promulgated herein, the Administrator is approving a 13-month extension in the Dallas-Fort Worth Region under section 110(e) of the Clean Air Act. The Act, however, requires that all control measures that are reasonably available must be applied by May 31, 1975. Accordingly, additional measures that have come to the attention of the Administrator and that are reasonably available in the affected areas are included in this promulgation. The first of the measures promulgated is a bus and car pool incentive and promotion program that will require all private and public employers of 1,000 or more employees to encourage them either to ride to work in car pools or to ride the bus. The second measure requires the State or approved local agencies to provide a computerized car pool service for employees working in the central business districts of Dallas and Fort Worth. By this means the forming of car pools may be facilitated and the number of vehicle miles traveled by individual automobiles can be reduced. It is now believed that these measures and those described below will be all that are necessary to attain the standards. If it becomes apparent, however, that further reductions will be necessary the Administrator will propose additional regulations.

The proposed regulation for preferential use of certain highway lanes for buses and car pools has been amended to provide more clarity. As promulgated the regulation specifies traffic flow corridors from all directions around the city into the central business districts of the major metropolitan areas of the AQCR. The governmental entity having jurisdiction over the roads within each corridor will be required to specify certain lanes and/or streets that will be designated for the exclusive use of buses and carpools. The corridors specified for Dallas encompass approximately 93 miles of roadway and those for Fort Worth encompass approximately 69 miles of roadway.

The regulation requiring preferential use of certain highway lanes for buses and carpools and the additional regulations described above were proposed to reduce the number of vehicle miles traveled. Testimony received at the public hearings suggests that Dallas and Fort Worth already have developed extensive traffic flow plans, soon to be implemented in those areas, that could achieve reductions in VMT equivalent to the measures proposed by EPA. In order to accommodate and utilize local planning EPA strongly encourages the use of these local plans. Thus, the regulations have been amended to accommodate these plans where possible. If it is demonstrated that local plans will achieve reductions equivalent to those proposed by EPA and these plans are submitted by the State to EPA by December 1, 1973, those plans will be utilized if approved by the Administrator. If such plans are not submitted and approved, EPA regulations will continue to be effective.

It also has been determined that by requiring a vapor recovery system for the control of evaporative losses from the filling of vehicular tanks for 100 percent of facilities located in the Dallas and Fort Worth Region, an inspection and maintenance system will not be necessary in that region. Public comment indicates that the general public would favor a full vapor recovery system above a mandatory inspection and maintenance program for all vehicles. For that reason, and because the standards can be achieved without an inspection and maintenance system, the requirement for such a program has been eliminated and the requirement for a full vapor recovery system has been retained. Emission inventory data indicate that the standard can be attained in the Dallas-Fort Worth area by the utilization of vapor control systems that require 80 percent control of evaporative emissions. For this reason, control systems will be required in the Dallas-Fort Worth Region by 1976 that will require 80 percent efficiency. For additional information on these control systems see "Systems and Costs to Control Hydrocarbon Emissions From Stationary Sources"; EPA Region VI Technical Support Document.

The baseline emission inventory which includes the effects of the present stationary source control and Federal motor vehicle controls is tabulated by major categories in Table 8–1. The emission inventory reductions for 1976 projected on the basis of the control strategies described above are summarized in Table 8–2.

TABLE 8–1.—*AQCR 8 (Dallas-Fort Worth) emission inventory*

[Tons per year]

Source category	1971[1]	1976
Stationary sources:		
Area sources	5,820	6,516
Chemical processing	5,696	4,553
Petroleum refining and petrochem	235	242
Other processing	4,722	4,413
Transportation sources:		
Gasoline-powered motor vehicles	107,391	65,083
Diesel-powered motor vehicles	993	1,300
Aircraft	15,698	12,176
Gasoline marketing	11,502	15,011
Other transportation[2]	5,422	5,422
Total	157,884	114,716
Percent reduction from baseline year resulting from present controls		27.3

[1] Baseline year.
[2] Off-highway fuel usage (farm, construction, etc.), vessels, and railroads.

TABLE 8–2.—*AQCR 8 emission reductions from 1971 levels under proposed strategy*

Control Measure:	*1976 (tons per year)*
Present controls	43,174
Extension of regulation V to Tarrant County	2,790
Full vapor recovery from service stations, including vapor return from motor vehicles	12,540
Aircraft emission controls	3,300
VMT reductions	------
Total	61,804

Baseline emission: 157,884 tons per year.
Required percent reduction: 34 percent.
Required emission reduction by 1976: 53,680 tons per year.

AQCR 9—SAN ANTONIO

AQCR 9 is composed of 24 counties covering 28,954 square miles. According

to the 1970 census the Region has a total population of 1,124,600 people. The 24 counties of AQCR 9 are: Atascosa, Bandera, Bexar, Comal, Dimmit, Edwards, Frio, Gillespie, Gonzales, Guadalupe, Karnes, Kendall, Kerr, Kimble, Kinney, LaSalle, Mason, Maverick, Medina, Real, Uvalde, Val Verde, Wilson, and Zavala. Approximately 75 percent of the population is located in Bexar County which includes San Antonio and its surrounding area, the major economic center for the Region.

The physiography of the area is generally hilly in the northwest with an altitude of 2,000 feet sloping to 400 feet in the southeast. The local climatology suggests good ventilation with prevailing southeasterly winds and favorable mixing depths.

The second highest one-hour oxidant measurement in AQCR 9 is 0.145 ppm and was recorded in 1971. Based on the straight percentage rollback procedure described in the proposal, this level requires a reactive carbon compound emission reduction of 45 percent from 1971 levels to meet the primary ambient air quality standard. Present stationary source regulations and Federal motor vehicle controls will provide a reduction of approximately 18.9 percent by 1975. The remaining 26.1 percent by 1977 will result from the following measures which are promulgated herein:

(1) Additional effect of Federal motor vehicle controls.

(2) Vapor recovery from all gasoline sales outlets, including vapor return from motor vehicle tanks.

(3) An inspection and maintenance program for light duty vehicles.

(4) Requirements that certain lanes of major streets and freeways be converted to bus and carpool use.

(5) Limitations on gasoline sales conditionally effective in 1977.

(6) A computerized carpool program.

(7) Bus and carpool incentive provided by employers.

To fully meet the requirements of the Clean Air Act by May 31, 1975 in the metropolitan San Antonio area would require a 40 percent reduction in VMT. However, it is the opinion of the Administrator that a reduction of 40 percent in VMT by 1975 would be socially disruptive. Therefore, the Administrator is requiring a control strategy which will implement controls including reductions in vehicle miles traveled as expeditiously as practicable, allow substantial economic savings and be fully implemented by May 31, 1977.

Proposed regulations for the control of organic solvent evaporation and architectural coatings for buildings have not been included in this promulgation. These regulations would result in only a small percentage of the reductions required for the region and it is believed that similar reductions may be achieved without utilizing the proposed regulations for control of organic solvent evaporation and limitations on new parking facilities.

Regulations requiring limitation on future construction of vehicle parking facilities have been replaced by a carpool matching program and provisions for preferential carpool treatment.

Proposed regulations for limitation of gasoline sales required that the State of Texas prohibit the delivery to retail outlets of more than 100 percent of the gasoline delivered to outlets during the 1972–1973 base year. Public testimony indicates that allowing no growth above the 1972–1973 base year may be severely socially disruptive. On this basis, the regulation requiring limitations on gasoline sales was reevaluated. It was determined that gasoline limitations should be used only in the event that the standard cannot be achieved by other measures. The regulation thus was amended to limit gasoline sales to the extent necessary to provide for achievement of the standard beginning in 1977, if the oxidant standard has not been achieved by other measures.

Additional vehicle restraints are included in the final regulations that were not among the proposed regulations. As indicated in the July 3, 1973 FEDERAL REGISTER, the Administrator has been continuing to study additional reasonably available measures that will result in reduction of vehicle miles traveled by automobiles. By the regulations promulgated herein, the Administrator is approving a two-year extension of time in the San Antonio Region under section 110(e) of the Clean Air Act. The Act, however, requires that all control measures that are reasonably available must be applied by May 31, 1975. Accordingly additional measures that have come to the attention of the Administrator and that are reasonably available in the affected areas are included in this promulgation. The first of these measures is a bus and carpool incentive and promotion program that will require all private and public employers of 1,000 or more employees in one location to provide incentives to those employers that will encourage them either to ride to work in carpools or to ride the bus. The second measure requires the State or approved local agencies to provide a computerized carpool service for employees working in the central business district of San Antonio. By this means the forming of carpools may be facilitated and the number of vehicle miles traveled by individual automobiles can be reduced. It is now believed that these measures and those described below will be sufficient to attain the oxidant standard. If it becomes apparent, however, that further reductions will be necessary, the Administrator will propose additional regulations.

The proposed regulation for preferential use of certain highway lanes for buses and carpools has been amended to provide more clarity. As promulgated, the regulation specified traffic flow corridors from all directions around the city into the central business district of San Antonio, the major metropolitan area of the AQCR. The governmental entity having jurisdiction over the roads within each corridor will be required to specify certain lanes and/or streets that will be designated for the exclusive use of buses and carpools. The corridors specified for San Antonio encompass approximately 79 miles of roadway.

Testimony received at the public hearings suggested that San Antonio already has developed extensive traffic flow plans, soon to be implemented, that could achieve reduction equivalent to the measures proposed by EPA. In order to accommodate and utilize local planning EPA strongly encourages the use of these local plans. Thus, the regulations have been amended to accommodate these plans where possible. If it is demonstrated that the San Antonio plan will achieve VMT reductions equivalent to those proposed by EPA and these plans are submitted by the State to EPA by December 1, 1973, those plans will be utilized if approved by the Administrator. If such plans are not submitted or not approved, the EPA regulation will continue to be effective.

The baseline emission inventory which includes the effects of Texas' Regulation V and Federal motor vehicle controls is tabulated by major categories in Table 9–1. The emission inventory for 1977 projected on the basis of control strategies described above is summarized in Table 9–2.

TABLE 9–1.—*AQCR 9 (San Antonio) emission inventory*

[Tons per year]

Source category	1971 [1]	1975	1977
Stationary sources:			
Area sources	1,837	956	975
Chemical processing	820	465	471
Petroleum refining and petrochem	873	123	125
Other processing	141	88	90
Transportation sources:			
Gasoline-powered motor vehicles	41,030	29,028	22,232
Diesel-powered motor vehicles	575	422	448
Aircraft	10,737	10,534	10,443
Gasoline marketing	4,895	6,031	6,645
Other transportation [2]	2,697	2,606	2,599
Total	63,105	51,209	45,003
Percent reduction from baseline year resulting from present controls		18.9	28.7

[1] Baseline year.
[2] Off-highway fuel usage (farm, construction, etc.), vessels, and railroads.

TABLE 9–2—*AQCR 9 emission reductions from 1971 under strategy*

Control Category:	*1977 Tons per year*
Present controls	18,102
Area source regulations	583
Full vapor recovery from service stations, including vapor return from motor vehicles	5,615
Aircraft emission controls	3,000
In-use vehicle strategies inspection/maintenance	1,301
VMT reduction	392
Total	28,993

Baseline emissions: 63,105 tons per year.
Required percent reduction: 45 percent.
Required emission reduction by 1977: 28,897 tons per year.

AQCR 11—EL PASO

The Texas portion of Region 11 is composed of 6 counties (Brewster, Culberson, El Paso, Hudspeth, Jeff Davis,

and Presidio) covering 21,778 square miles in the westernmost part of the State. The area is characterized by an arid climate, mountainous terrain, and high daytime summer temperatures.

According to the 1970 census, of the 379,261 people residing in the Region, 359,291 people are concentrated in El Paso County. The City of Juarez, Mexico lies immediately adjacent to the El Paso City Limits, separated only by the Rio Grande. The population of Juarez is estimated to be 450,000 and in terms of air pollution should most properly be considered part of the air quality control region. (Wind rose data indicates that El Paso is downwind from Juarez roughly 15 percent of the time, while the reverse is true roughly 20 percent of the time.)

The second highest one-hour oxidant measurement in the region was 0.12 ppm (measured in 1971). Based on the proportional rollback procedure described in this proposed plan, this level requires a reactive hydrocarbon emission reduction of 34 percent from 1971 levels to meet the primary ambient air quality standard. Present stationary source regulations and Federal motor vehicle controls will provide a reduction of 22.2 percent by 1975. The remaining 11.8 percent reduction by 1975 can be attained by the following measures:

(1) Control of evaporative losses from the filling of storage vessels; and

(2) Vapor recovery from all gasoline sales outlets, including vapor return from motor vehicle tanks.

Proposed regulations for the control of organic solvent evaporation and architectural coatings for buildings have been omitted from these final regulations. Implementation of the proposed regulation would achieve only about 0.3 percent of the necessary reductions. It was determined, therefore, that the required reductions could be achieved without the utilization of this regulation.

The control strategy for the El Paso AQCR is designed to attain the standards by 1975 and additional measures for the reduction of VMT were not proposed. The City of El Paso, however, has expressed a willingness and intent to improve the transit service and general traffic flow plan. Certain improvements already have been demonstrated to EPA during visits by representatives to the El Paso area. The tables reflect this. It is anticipated that further improvements will be made by the City and that although the measures are not required at this time by EPA, the VMT in the El Paso region will be decreased by the City's actions.

An inspection and maintenance program for light-duty vehicles was proposed for the El Paso region. Reevaluation of this program has shown that it cannot be fully implemented in the State of Texas until May 1, 1976. Use of this measure would require an extension of time for meeting the oxidant standard in the El Paso region. It has been determined that by requiring a full vapor recovery system for the control of evaporative losses from the filling of vehicular tanks for 100 percent of the facilities located in the El Paso region by May 31, 1975, an inspection and maintenance system will not be necessary in that region. Public testimony also shows that the general public would favor a full vapor recovery system above a mandatory inspection and maintenance program. Although extensions have been granted other AQCR's for full implementation of vapor recovery systems, it is believed that equipment is available in sufficient quantities to fully implement the systems in the El Paso region by 1975. By doing so, it will not be necessary to grant an extension to the El Paso region, and alternative or interim measures that must be implemented before an extension may be granted will not be necessary. In order to assure attainment of the standard, vapor recovery systems that will achieve 90 percent control of vapor emissions are required in the El Paso region. As explained in the general preamble above it has been determined that sufficient equipment will be available for the limited number of service stations in this region by 1975 (See Control Strategy and EPA Region VI Technical Support Document).

The emission inventory which includes the effects of Texas' Regulation V and Federal motor vehicle controls is tabulated by major categories in Table 11-1. The emissions inventory for 1975 projected on the basis of control strategies described above is summarized in Table 11-2.

TABLE II-1.—*AQCR 11 (El Paso) emission inventory*

[Tons per year]

Source category	1971 [1]	1975
Stationary sources:		
Area sources	374	376
Chemical processing	24	5
Petroleum refining and petrochem	557	53
Other processing	10	32
Transportation sources:		
Gasoline-powered motor vehicles	14,845	10,647
Diesel-powered motor vehicles	125	140
Aircraft	2,180	2,020
Gasoline marketing	1,664	1,978
Other transportation [2]	553	548
Total	20,309	15,798
Percent reduction from baseline year resulting from present controls		22.2

[1] Baseline year.
[2] Off-highway fuel usage (farm, construction, etc.), vessels, and railroads.

TABLE II-2—*AQCR 11—emission reduction from 1971 levels under strategy*

	1975 (tons per year)
Present controls	4,511
Gasoline marketing evaporative emissions:	
Underground storage tank vapor return and vapor return from motor vehicles	1,613
Aircraft emission controls	650
VMT reductions already achieved	131
Total	6,905

Baseline emissions: 20,309 tons per year.
Required percent reduction: 34%.
Required emission reduction by 1975: 6,905 tons per year.

This notice of rulemaking is issued under the authority of Sections 110(c) and 301(a) of the Clean Air Act.

(42 U.S.C. 1857C-5(c), 1857g)

Dated: October 25, 1973.

RUSSELL E. TRAIN,
Administrator.

Subpart SS, Texas, of Part 52 of Chapter I, Title 40, of the Code of Federal Regulations is amended as follows:

1. Section 52.2272 is added to read as follows:

§ 52.2272 Extensions.

(a) The Administrator hereby extends the attainment dates for the national standards for photochemical oxidants (hydrocarbons) as follows: Houston-Galveston, two years (to May 31, 1977); Dallas-Fort Worth, thirteen months (to June 30, 1976); and San Antonio, two years (to May 31, 1977).

2. Section 52.2275 is added to read as follows:

§ 52.2275 Control strategy: Photochemical oxidants (hydrocarbons).

(a) The requirements of § 51.14(a) of this chapter are not met since the plan submitted by the State does not provide the degree of hydrocarbon emission reduction necessary to attain as expeditiously as practicable and to maintain the national standards for photochemical oxidents (hydrocarbons) in the Austin-Waco, Dallas-Fort Worth, San Antonio, El Paso-Las Cruces-Alamogordo, Corpus Christi-Victoria, and Houston-Galveston air quality control regions, and in the Texas portion of the Southern Louisiana-Southeast Texas air quality control region.

§ 52.2278 [Reserved]

3. Section 52.2278 is revoked and reserved.

§ 52.2279 [Amended]

4. In § 52.2279, the attainment date table is amended by revoking footnote "b" and by revising the first column ("Air quality control region") and the last column ("Photochemical oxidants (hydrocarbons)") to read as follows:

Abilene-Wichita Falls Intrastate.	• • •	(a).
Amarillo-Lubbock Intrastate	• • •	(a).
Austin-Waco Intrastate	• • •	*May 31, 1975.*
Brownsville-Laredo Intrastate	• • •	(a).
Corpus Christi-Victoria Intrastate.	• • •	*May 31, 1975.*
Midland-Odessa-San Angelo Intrastate.	• • •	(a).
Metropolitan Houston-Galveston Intrastate.	• • •	*May 31, 1977.*
Metropolitan Dallas-Fort Worth Intrastate.	• • •	*June 30, 1976.*
Metropolitan San Antonio Intrastate.	• • •	*May 31, 1977.*
Southern Louisiana-Southeast Texas Interstate.	• • •	*May 31, 1975.*
El Paso-Las Cruces-Alamogordo Interstate.	• • •	*May 31, 1975.*
Shreveport-Texarkana Tyler Interstate.	• • •	(a).

§ 52.2280 [Reserved]

5. Section 52.2280 is revoked and reserved.

6. Sections 52.2283 through 52.2298 are added to read as follows:

§ 52.2283 Control of volatile carbon compounds.

(a) The requirements of Texas Air Control Board Regulation V are incorporated herein by reference and Rule 501 of that Regulation is amended to include (in addition to those counties named therein) Bell, McLennan, Hardin, and Tarrant Counties in Texas.

(b) Except as provided in paragraph (c) of this section, the owner or operator of a source subject to paragraph (a) of this section shall comply with the increments contained in the following compliance schedule.

(1) Contracts for emission control systems or process modifications must be awarded or orders must be issued for the purchase of component parts to accomplish emission control or process modification not later than March 31, 1974.

(2) Initiation of on-site construction or installation of emission control equipment or process change must begin not later than July 31, 1974.

(3) On-site construction or installation of emission control equipment or process modification must be completed not later than March 31, 1975.

(4) Final compliance is to be achieved not later than May 31, 1975.

(5) Any owner or operator of stationary sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within five days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(c) Paragraph (b) of this section shall not apply:

(1) To a source which is presently in compliance with paragraph (a) of this section and which has certified such compliance to the Administrator by December 1, 1973. The Administrator may request whatever supporting information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) To a source whose owner or operator submits to the Administrator, by December 1, 1973 a proposed alternative schedule. No such schedule may provide for compliance after May 31, 1975. If approval is promulgated by the Administrator, such schedule shall satisfy the requirements of this section for the affected source.

(d) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in paragraph (b) of this section fails to satisfy the requirements of § 51.15 (b) and (c) of this chapter.

§ 52.2284 Control of degreasing operations.

(a) Definitions:

(1) "Degreasing" means the operation of using an organic solvent as a surface cleaning agency.

(2) "Organic solvents" include diluents and thinners and are defined as organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents.

(3) "Organic material" means a chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, and ammonium carbonate.

(4) "Photochemically reactive solvent" means any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below, or which exceeds any of the following individual percentage composition limitations, as referred to the total volume of solvent.

(i) A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cycloolefinic type of unsaturation: 5 percent.

(ii) A combination of aromatic compounds with 8 or more carbon atoms to the molecule except ethylebenzene: 8 percent.

(iii) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene, or toluence: 20 percent.

(b) This section is applicable in The Houston-Galveston and San Antonio Intrastate Air Quality Control Regions in the State of Texas.

(c) The following are exempt from the requirements of paragraph (d) of this section.

(1) Degreasing operations which emit less than 3 pounds per hour and less than 15 pounds per day of uncontrolled organic materials.

(2) Degreasing operations which use perchloroethylene, 1, 1, 1-tri-chloroethane, or saturated halogenated hydrocarbons as an organic solvent.

(d) No person shall use for degreasing any photochemically reactive solvent unless the uncontrolled organic emissions from such operation are controlled at least 85 percent overall.

(e) Any owner or operator of a degreasing operation who elects to switch use of solvents to one or more of the solvents exempt under paragraph (c) (2) of this section shall specify intent to the Administrator no later than January 1, 1974. Such a solvent switch shall be made no later than May 31, 1974.

(f) Except as provided in paragraph (g) of this section the owner or operator of any degreasing operation subject to the requirements of paragraph (d) of this section shall comply with the following compliance schedule:

(1) January 1, 1974—Submit to the Administrator a final control plan which describes at a minimum, steps which will be taken by the owner or operator to achieve compliance with the requirements of paragraph (d) of this section.

(2) March 1, 1974—Negotiate and sign all necessary contracts for emission control systems or process modifications, or issue orders for the purchase of component parts to accomplish emission control or process modification.

(3) July 1, 1974—Initiate on-site construction or installation of emission control equipment or process modification.

(4) May 1, 1975—Complete on-site construction or installation of emission control equipment or process modification.

(5) May 31, 1975—Achieve final compliance with the requirements of paragraph (d) of this section.

(6) Any owner or operator of a degreasing operation subject to the compliance schedule in this paragraph shall certify to the Administrator within five days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(g) Paragraph (f) of this section shall not apply to:

(1) A degreasing operation which is presently in compliance with the requirements of paragraph (d) of this section and which has certified such compliance to the Administrator by January 1, 1974. The Administrator may request whatever supporting information he considers necessary for proper certification.

(2) A degreasing operation for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) A degreasing operation whose owner or operator submits to the Administrator, by January 1, 1974, a proposed alternative schedule. No such schedule may provide for compliance after May 31, 1975. If promulgated by the Administrator, such schedule shall satisfy the requirements of this section for the affected degreasing operation.

(h) Nothing in this section shall prevent the Administrator from promulgating a separate schedule for any degreasing operation to which the application of the compliance schedule in paragraph (f) of this section fails to satisfy the requirements of § 51.15 (b) and (c) of this chapter.

(i) Any person subject to this regulaton who begins a degreasing operation after the effective date of this regulation shall comply with the requirements of paragraphs (c), (d), and (e) of this section. Any degreasing operation subject to this regulation which begins operation after May 31, 1975, shall comply with the requirements of paragraphs (c) and (d) of this section at the time such operation begins.

§ 52.2285 Control of evaporative losses from the filling of storage vessels by 1976.

(a) Definitions:

(1) "Gasoline" means any petroleum distillate having a Reid vapor pressure of four pounds or greater.

(2) "Storage vessel" means any stationary vessel of more than 1,000 gallons (3,800 liters) capacity.

(b) This section is applicable within the Houston-Galveston, Dallas-Fort Worth, and San Antonio Intrastate Air Quality Control Regions in Texas.

(c) No person shall transfer gasoline from any delivery vessel into any stationary storage container with a capacity greater than 1,000 gallons unless such container is equipped with a submerged fill pipe and unless the displaced vapors from the storage container are processed

by a system that prevents release to the atmosphere of no less than 90 percent by weight of organic compounds in said vapors displaced from the stationary container location.

(1) The vapor recovery portion of the system shall include one or more of the following:

(i) A vapor-tight return line from the storage container to the delivery vessel and a system that will ensure that the vapor return line is connected before gasoline can be transferred into the container.

(ii) Refrigeration-condensation system or equivalent designed to recover no less than 90 percent by weight of the organic compounds in the displaced vapor.

(2) If a "vapor-tight vapor return" system is used to meet the requirements of this section, the system shall be so constructed as to be readily added on to retrofit with an adsorption system, refrigeration-condensation system, or equivalent vapor removal system, and so constructed as to anticipate compliance with § 52.2288 or § 52.2289.

(3) The vapor-laden delivery vessel shall be subject to the following conditions:

(i) The delivery vessel must be so designed and maintained as to be vapor-tight at all times.

(ii) The vapor-laden delivery vessel may be refilled only at facilities equipped with a vapor recovery system or the equivalent, which can recover at least 90 percent by weight of the organic compounds in the vapors displaced from the delivery vessel during refilling.

(iii) Gasoline storage compartments of one thousand gallons or less in gasoline delivery vehicles presently in use on the promulgation date of this regulation will not be required to be retrofitted with a vapor return system until January 1, 1977.

(d) The provisions of paragraph (c) of this section shall not apply to the following:

(1) Stationary containers used exclusively for the fueling of implements of husbandry.

(2) Any container having a capacity less than 2,000 gallons installed prior to promulgation of this section.

(3) Transfers made to storage tanks equipped with floating roofs or their equivalent.

(e) Except as provided in paragraph (f) of this section, the owner or operator of a source subject to paragraph (c) of this section shall comply with the increments contained in the following compliance schedule:

(1) Contracts for emission control systems or process modifications must be awarded or orders must be issued for the purchase of component parts to accomplish emission control or process modification not later than March 31, 1975.

(2) Initiation of onsite construction or installation of emission control equipment or process change must begin not later than July 1, 1975.

(3) On-site construction or installation of emission control equipment or process modification must be completed not later than March 31, 1976.

(4) Final compliance is to be achieved not later than May 31, 1976.

(5) Any owner or operator of stationary sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within five days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(f) Paragraph (e) of this section shall not apply:

(1) To a source which is presently in compliance with paragraph (c) of this section and which has certified such compliance to the Administrator by January 1, 1974. The Administrator may request whatever supporting information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) To a source whose owner or operator submits to the Administrator by January 1, 1974 a proposed alternative schedule. No such schedule may provide for compliance after May 31, 1976. If approval is promulgated by the Administrator, such schedule shall satisfy the requirements of this section for the affected source.

(g) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in paragraph (e) of this section fails to satisfy the requirements of § 51.15(b) and (c) of this chapter.

(h) Any gasoline dispensing facility subject to this regulation which installs a storage tank after the effective date of this regulation shall comply with the requirements of paragraphs (c) and (e) of this section. A facility subject to this regulation which installs a storage tank after May 31, 1976 shall comply with the requirements of paragraph (c) of this section at the time of installation.

§ 52.2286 Control of evaporative losses from the filling of storage vessels by 1975.

(1) "Gasoline" means any petroleum distillate having a Reid vapor pressure of four pounds or greater.

(2) "Storage vessel" means any stationary vessel of more than 1,000 gallons (3,800 liters) capacity.

(b) This section is applicable within the Austin-Waco Intrastate and the Texas portion of the El Paso-Las Cruces-Alamagordo Interstate Air Quality Control Regions in the State of Texas.

(c) No person shall transfer gasoline from any delivery vessel into any stationary storage container with a capacity greater than 1,000 gallons unless such container is equipped with a submerged fill pipe and unless the displaced vapors from the storage container are processed by a system that prevents release to the atmosphere of no less than 90 percent by weight of organic compounds in said vapors displaced from the stationary container location.

(1) The vapor recovery portion of the system shall include one or more of the following:

(i) A vapor-tight return line from the storage container to the delivery vessel and a system that will ensure that the vapor return line is connected before gasoline can be transferred into the container.

(ii) Refrigeration-condensation system or equivalent designed to recover no less than 90 percent by weight of the organic compounds in the displaced vapor.

(2) If a "vapor-tight vapor return" system is used to meet the requirements of this section, the system shall be so constructed as to be readily added on to retrofit with an adsorption system, refrigeration-condensation system, or equivalent vapor removal system, and so constructed as to anticipate compliance with § 52.2288.

(3) The vapor-laden delivery vessel shall be subject to the following conditions:

(i) The delivery vessel must be so designed and maintained as to be vapor-tight at all times.

(ii) The vapor-laden delivery vessel may be refilled only at facilities equipped with a vapor recovery system or the equivalent, which can recover at least 90 percent by weight of the organic compounds in the vapors displaced from the delivery vessel during refilling.

(iii) Gasoline storage compartments of one thousand gallons or less in gasoline delivery vehicles presently in use on the promulgation date of this regulation will not be required to be retrofitted with a vapor return system until January 1, 1976.

(d) The provisions of paragraph (c) of this section shall not apply to the following:

(1) Stationary containers used exclusively for the fueling of implements of husbandry.

(2) Any container having a capacity less than 2,000 gallons installed prior to promulgation of this section.

(3) Transfers made to storage tanks equipped with floating roofs or their equivalent.

(e) Except as provided in paragraph (f) of this section, the owner or operator of a source subject to paragraph (c) of this section shall comply with the increments contained in the following compliance schedule:

(1) Contracts for emission control systems or process modifications must be awarded or orders must be issued for the purchase of component parts to accomplish emission control or process modification not later than March 31, 1974.

(2) Initiation of on-site construction or installation of emission control equipment or process change must begin not later than July 1, 1974.

(3) On-site construction or installation of emission control equipment or process modification must be completed not later than March 31, 1975.

(4) Final compliance is to be achieved not later than May 31, 1975.

(5) Any owner or operator of stationary sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within five days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(f) Paragraph (e) of this section shall not apply:

(1) To a source which is presently in compliance with paragraph (c) of this section and which has certified such compliance to the Administrator by January 1, 1974. The Administrator may request whatever supporting information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) To a source whose owner or operator submits to the Administrator by January 1, 1974, a proposed alternative schedule. No such schedule may provide for compliance after May 31, 1975. If approval is promulgated by the Administrator, such schedule shall satisfy the requirements of this section for the affected source.

(g) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in paragraph (e) of this section fails to satisfy the requirements of § 51.15 (b) and (c) of this chapter.

(h) Any gasoline dispensing facility subject to this regulation which installs a storage tank after the effective date of this regulation shall comply with the requirements of paragraphs (c) and (e) of this section. A facility subject to this regulation which installs a storage tank after May 31, 1975 shall comply with the requirements of paragraph (c) of this section at the time of installation.

§ 52.2287 Ship and barge loading and unloading facilities.

(a) Rule 503.2 of the Texas Air Control Board Regulation V as incorporated by reference on May 31, 1972 (37 FR 10842) is amended to read: "All loading and unloading facilities for crude oil or condensate are exempt from Rule 503." This amendment eliminates an exemption for ships and barges.

(b) This section is applicable to ships and barges which use the port facilities within the Houston-Galveston Intrastate Region.

(c) Except as provided in paragraph (d) of this section, the owner or operator of a source subject to paragraph (a) of this section shall comply with the increments contained in the following compliance schedule.

(1) Contracts for emission control systems or process modifications not later than March 31, 1974.

(2) Initiation of on-site construction or installation of emission control equipment or process change must begin not later than July 31, 1974.

(3) On-site construction or installation of emission control equipment or process modification must be completed not later than March 31, 1975.

(4) Final compliance is to be achieved not later than May 31, 1975.

(5) Any owner or operator of stationary sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within five days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(d) Paragraph (c) of this section shall not apply:

(1) To a source which is presently in compliance with paragraph (a) of this section and which has certified such compliance to the Administrator by January 1, 1974. The Administrator may request whatever supporting information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the Administrator.

(3) To a source whose owner or operator submits to the Administrator by January 1, 1974, a proposed alternative schedule. No such schedule may provide for compliance after May 31, 1975. If approval is promulgated by the Administrator, such schedule shall satisfy the requirements of this section for the affected source.

(e) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in paragraph (c) of this section fails to satisfy the requirements of § 51.15(b) and (c) of its chapter.

§ 52.2288 Control of evaporative losses from the filling of vehicular tanks; Houston, San Antonio, and El Paso Regions.

(a) "Gasoline" means any petroleum distillate having a Reid vapor pressure of four pounds or greater.

(b) This section is applicable in the Houston-Galveston and San Antonio Intrastate Regions in Texas, and the Texas portion of the El Paso-Las Cruces-Alamogordo Interstate Air Quality Control Region.

(c) A person shall not transfer gasoline to an automotive fuel tank from gasoline dispensing systems unless the transfer is made through a fill nozzle designed to:

(1) Prevent discharge of hydrocarbon vapors to the atmosphere from either the vehicle filler neck or the dispensing nozzle;

(2) Direct vapor displaced from the automotive fuel tank to a system wherein at least 90 percent by weight of the organic compounds in displaced vapors are recovered; and

(3) Prevent automotive fuel tank overfills or spillage on fill nozzle disconnect.

(d) The system referred to in paragraph (c) of this section can consist of a vapor-tight vapor return line from the fill nozzle-filler neck interface to the dispensing tank, to an adsorption, absorption, incineration, refrigeration-condensation system or equivalent.

(e) If it is demonstrated to the satisfaction of the Administrator that it is impractical to comply with the provisions of paragraph (c) of this section as a result of vehicle fill neck configuration, location, or other design features of a class of vehicles, the provisions of this section shall not apply to such vehicles. However, in no case shall such configuration exempt any gasoline dispensing facility from installing a system referred to in paragraph (c) of this section.

(f) All facilities subject to this section shall be divided into two classes. All facilities located in the Texas portion of the El Paso-Las Cruces-Alamogordo Interstate Region shall be in Class I. All other facilities in the State of Texas subject to this section shall be in Class II.

(g) Except as provided in paragraph (i) of this section, the owner or operator of a source included in Class I shall comply with the increments contained in the following compliance schedule:

(1) Contracts for emission control systems or process modifications must be awarded or orders must be issued for the purchase of component parts to accomplish emission control or process modification not later than March 31, 1974.

(2) Initiation of on-site construction or installation of emission control equipment or process change must begin not later than July 1, 1974.

(3) On-site construction or installation of emission control equipment or process modification must be completed not later than March 31, 1975.

(4) Final compliance is to be achieved not later than May 31, 1975.

(5) Any owner or operator of stationary sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within five days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(h) The owner or operator of a source included in Class II shall comply with the increments contained in the following compliance schedule, except as provided in paragraph (i) of this section.

(1) Contracts for emission control systems or process modifications must be awarded or orders must be issued for the purchase of component parts to accomplish emission control or process modification not later than March 31, 1975.

(2) Initiation of on-site construction or installation of emission control equipment or process change must begin not later than July 1, 1976.

(3) On-site construction or installation of emission control equipment or process modification must be completed not later than March 31, 1977.

(4) Final compliance is to be achieved not later than May 31, 1977.

(5) Any owner or operator of stationary sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within five days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(i) Paragraphs (g) and (h) of this section shall not apply:

(1) To a source which is presently in compliance with paragraph (c) of this section and which has certified such compliance to the Administrator by December 1, 1973. The Administrator may re-

quest whatever information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) To a source whose owner or operator submits to the Administrator, by December 1, 1973, a proposed alternative schedule. No such schedule may provide for compliance after May 31, 1975, in the case of Class I sources, and May 31, 1977, in the case of Class II sources. If approval is promulgated by the Administrator, such schedule shall satisfy the requirements of this section for the affected source.

(j) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedules of this section fail to satisfy the requirements of § 51.15(b) and (c) of this chapter.

(k) Any gasoline dispensing facility subject to this regulation which installs a gasoline dispensing system after the effective date of this regulation shall comply with the requirements of paragraphs (c) and (g) (or (h)) of this section. In the case of Class I sources, a facility subject to this regulation which installs a gasoline dispensing system after March 31, 1975, shall comply with the requirements of paragraph (c) of this section at the time of installation. In the case of Class II sources, a facility subject to this regulation which installs a gasoline dispensing system after March 31, 1977, shall comply with the requirements of paragraph (c) of this section at the time of installation.

§ 52.2289 Control of evaporative losses from the filling of vehicular tanks; Dallas-Fort Worth Region.

(a) "Gasoline" means any petroleum distillate having a Reid vapor pressure of four pounds or greater.

(b) This section is applicable in the Dallas-Fort Worth Intrastate Air Quality Control Region.

(c) A person shall not transfer gasoline to an automotive fuel tank from gasoline dispensing systems unless the transfer is made through a fill nozzle designed to:

(1) Prevent discharge of hydrocarbon vapors to the atmosphere from the vehicle filler neck of dispenser;

(2) Direct vapor displaced from the automotive fuel tank to a system wherein at least 80 percent by weight of the organic compounds in displaced vapors are recovered; and

(3) Prevent automotive fuel tank overfills or spillage on fill nozzle disconnect.

(d) The system referred to in paragraph (c) of this section can consist of a vapor-tight return line from the fill nozzle-filler neck interface to the dispensing tank, to an adsorption, absorption, incinceration, refrigeration-condensation system or equivalent.

(e) If it is demonstrated to the satisfaction of the Administrator that it is impractical to comply with the provisions of paragraph (c) of this section as a result of vehicle fill neck configuration, location, or other design features of a class of vehicles, the provisions of this section shall not apply to such vehicles. However, in no case shall such configuration exempt any gasoline dispensing facility from installing a system referred to in paragraph (c) of this section.

(f) Except as provided in paragraph (g) of this section, the owner or operator of a source subject to this regulation shall comply with the increments contained in the following compliance schedule:

(1) Contracts for emission control systems or process modifications must be awarded or orders must be issued for the purchase of component parts to accomplish emission control or process modification not later than March 31, 1975.

(2) Initiation of on-site construction or installation of emission control equipment or process change must begin not later than July 1, 1975.

(3) On-site construction or installation of emission control equipment or process modification must be completed not later than April 30, 1976.

(4) Final compliance is to be achieved not later than June 30, 1976.

(5) Any owner or operator of stationary sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within five days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(g) Paragraph (f) of this section shall not apply:

(1) To a source which is presently in compliance with paragraph (c) of this section and which has certified such compliance to the Administrator by January 1, 1974. The Administrator may request whatever information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) To a source whose owner or operator submits to the Administrator, by January 1, 1974, a proposed alternative schedule. No such schedule may provide for compliance after May 31, 1976. If approval is promulgated by the Administrator, such schedule shall satisfy the requirements of this section for the affected source.

(h) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in paragraph (f) of this section fails to satisfy the requirements of § 51.15 (b) and (c) of this chapter.

(i) Any gasoline dispensing facility subject to this regulation which installs a gasoline dispensing system after the effective date of this regulation shall comply with the requirements of paragraphs (c) and (f) of this section. Any facility subject to this regulation which installs a gasoline dispensing system after March 1, 1976, shall comply with the requirements of paragraph (c) of this section at the time of installation.

§ 52.2290 Regulation for a motor vehicle inspection and maintenance program.

(a) Definitions:

(1) "Inspection and maintenance program" means a program to reduce emissions from in-use vehicles through identifying vehicles which need emission control related maintenance and requiring that maintenance to be performed.

(2) All other terms used in this section which are defined in appendix N of Part 51 of this chapter are used with the meanings so defined.

(b) This section is applicable in those counties contained within the Houston-Galveston Region and in Bexar, Guadalupe, Atascosa, Kendall, Medina, Comal, and Wilson counties which are within the San Antonio Instrastate Air Quality Control Region.

(c) The State of Texas shall establish an inspection and maintenance program applicable to all light duty vehicles registered in the counties subject to this section which operate on streets or highways over which it has ownership or control. No later than June 1, 1974, the State shall submit to the Administrator legally adopted regulations to adopt such a program. The State may exempt any class or category of vehicles which the State finds are rarely used on public streets and highways (such as classic or antique vehicles). The regulations shall include:

(1) Provisions for inspection of all light-duty motor vehicles at periodic intervals no more than one year apart by means of an idle test.

(2) Provisions for inspection failure criteria including measures to reduce vehicle hydrocarbon emissions by at least 8 percent in the first inspection cycle. If the Administrator determines, on the basis of air quality monitoring in the areas subject to this section, that the national ambient air quality standards for photochemical oxidants will not be attained by May 31, 1977, the foregoing failure criteria shall include measures to reduce vehicle hydrocarbon emissions by at least 11 percent, effective January 1, 1977.

(3) Provisions to ensure that failed vehicles receive the maintenance necessary to achieve compliance with the inspection standards. This shall include sanctions against individual owners and repair facilities, retest of failed vehicles following maintenance, a certification program to ensure that repair facilities performing the required maintenance have the necessary equipment, parts, and knowledge to perform the tasks satisfactorily, and such other measures as may be necessary or appropriate.

(4) A program of enforcement to ensure that vehicles are not intentionally re-adjusted or modified subsequent to the inspection and/or maintenance in such a way as would cause them to no longer comply with the inspection standards. This should include but not be limited to spot checks of the idle adjustments and/or a suitable type of physical tagging. This program shall include appropriate penalties for violation.

(5) Designation of an agency or agencies responsible for conducting, overseeing, and enforcing the inspection and maintenance program.

(d) After April 30, 1975, the State shall not allow issuance of a Texas Department of Public Safety Inspection sticker for any light duty motor vehicle which does not comply with the applicable standards and procedures adopted pursuant to paragraph (c) of this section. This shall not apply to the initial registration of a new motor vehicle.

(e) After April 30, 1976, the State shall not register or allow to operate on its highways any light duty motor vehicle which does not comply with the applicable standards and procedures adopted pursuant to paragraph (c) of this section. This shall not apply to the initial registration of a new motor vehicle.

(f) After April 30, 1976, no owner of a light duty motor vehicle shall operate or allow the operation of such vehicle which does not comply with the applicable standards and procedures adopted pursuant to paragraph (c) of this section. This shall not apply to the initial registration of a new motor vehicle.

(g) The State of Texas shall submit, no later than March 1, 1974, a detailed compliance schedule showing the steps it will take to establish and enforce an inspection and maintenance program pursuant to paragraph (c) of this section, including the text of needed statutory proposals and needed regulations which it will propose for adoption. The compliance schedule shall also include:

(1) The date by which the State will recommend any needed legislation to the State legislature.

(2) The date by which necessary equipment will be ordered.

(3) A signed statement from the Governor or State Treasurer identifying the sources and amounts of funds for the program. If funds cannot legally be obligated under existing statutory authority, the text of needed legislation will be submitted.

§ 52.2291 Regulation for vacuum spark advance disconnect retrofit.

(a) "Vacuum spark advance disconnect retrofit" means a device or system installed on the vehicle that prevents the ignition vacuum advance from operating either when the vehicle's transmission is in the lower gears, or when the vehicle is traveling below a predetermined speed.

(b) This section is applicable in the Houston-Galveston Intrastate Region in the State of Texas.

(c) All gasoline powered light duty vehicles of model years prior to 1968 and subject under presently existing legal requirements to registration in the area described in paragraph (b) of this section, shall be equipped with an appropriate vacuum spark advance disconnect retrofit. The State may exempt any class or category of vehicles which the State finds are rarely used on public streets and highways (such as classic or antique vehicles), or for which the State demonstrates to the Administrator that retrofit devices are not commercially available.

(d) The State of Texas shall submit no later than January 1, 1974, a detailed compliance schedule showing steps it will take to implement and enforce this requirement. Each schedule shall include the following:

(1) A date by which the State will evaluate and approve modifications for use in this program. Such date shall be not later than March 1, 1974.

(2) A date by which this modification will begin to be required. Such date shall not be later than May 1, 1975.

(3) A date by which all light duty motor vehicles subject to this section will be modified. Such date shall be not later than May 1, 1976.

(4) An agency responsible for evaluating and approving such modifications and/or devices for use on light-duty motor vehicles subject to this section.

(5) An agency responsible for ensuring that the provisions of this section shall be enforced.

(6) A method and proposed procedures for ensuring that those performing the modification have the training and ability to accomplish the needed tasks satisfactorily and will have an adequate supply of retrofit components.

(7) Provision (apart from the requirements of any program for periodic inspection and maintenance of vehicles generally) for emissions testing at the time of modification or some other positive assurance that the modification achieves the desired results.

(e) After May 1, 1976, the following shall apply to the areas specified in paragraph (b) of this section:

(1) The State shall not register a light duty motor vehicle subject to this section which is not modified in accordance with paragraph (c) of this section.

(2) No owner of a light duty motor vehicle subject to this section shall operate or allow the operation of any such vehicle owned by him which is not modified in accordance with paragraph (c) of this section.

(f) No later than June 1, 1974, the State shall submit legally adopted regulations to assure full compliance with all of the provisions of this section.

§ 52.2292 Regulation for limitation of new reactive carbon compound emission sources.

(a) Definitions:

(1) "Source" means any stationary structure that emits or causes the emission of any reactive carbon compound.

(2) "Reactive carbon compound" means any compound containing carbon and hydrocarbon except for the following: C_1–C_5 n-parafins, saturated halogenated hydrocarbons, perchloroethylene, benzene, acetylene, acetone, cyclohexanone, ethyl acetate, diethylamine, isobutyl acetate, isopropyl alcohol, menthyl benzoate, 2-nitropropane, phenyl acetate, and triethylamine.

(b) This section is applicable in the Houston-Galveston Intrastate Region.

(c) Effective May 31, 1975, no person shall commence construction or modification of any source within the area specified by paragraph (b) of this section unless a permit is first issued to the source by the Texas Air Control Board pursuant to the provisions of Rule 601, et seq. of Texas Air Control Board Regulation VI, effective August 31, 1972, as amended. No permit shall be issued by the Texas Air Control Board unless there is an affirmative finding by the Texas Air Control Board that such source will emit reactive carbon compounds at a rate of less than 3 pounds per hour and less than 15 pounds per day.

§ 52.2293 Gasoline limitations.

(a) Definitions:

(1) "Distributor" means any person or entity which transports or stores or causes the transportation or storage of gasoline between any refinery and any retail outlet.

(2) "Retail outlet" means any establishment at which gasoline is sold or offered for sale to the public, or introduced into any vehicle.

(b) This section is applicable in the Houston-Galveston and San Antonio Intrastate Air Quality Control Regions (hereafter referred to as "affected areas") to all distributors of gasoline to any retail outlet in the affected areas, and to the owners and operators of all retail outlets in the affected areas.

(c) If the Administrator determines, on the basis of air quality monitoring in the affected areas, that the national ambient air quality standards for carbon monoxide and photochemical oxidants will not be attained in these areas by May 31, 1977, the Administrator shall implement a program, to be effective no later than May 31, 1977, limiting the total gallonage of gasoline delivered to retail outlets in the affected areas to that amount which, when combusted, will not result in such ambient air quality standards being exceeded.

(d) All distributors to which this section applies shall provide the Administrator with a detailed annual accounting of the amount of gasoline delivered to each retail outlet in the region for calendar year 1976, and for each calendar year during which the gasoline limitation program is in effect. The owner or operator of each retail outlet to which this section applies shall provide the Administrator with a detailed accounting of gasoline received from each distributor, the total amount of gasoline sold during the year, and the amount of gasoline on hand at the beginning and end of the year, for each year during which the gasoline limitation program is in effect. All accountings required by this section shall be provided no later than ninety days after the end of the applicable year. The Administrator may require any other reports that he may deem necessary for the implementation of this section.

§ 52.2294 Preferential bus/carpool treatment.

(a) Definitions:

(1) For purposes of this section, "carpool" means a motor vehicle containing three or more persons.

(2) "Bus/carpool lane" means a lane on a street or highway open only to buses (or buses and carpools), whether constructed specially for that purpose or converted from existing lanes.

(3) "Bus/carpool street" means a street or highway open only to buses (or buses and carpools), whether constructed specially for that purpose or converted from an existing street or highway.

(4) "Central business district" is defined for each of the affected areas as follows:

(i) For the City of Houston, that area bounded on the northwest by Interstate 45, on the southwest by Interstate 45, on the northeast by Franklin Street, and on the southeast by Caroline Street.

(ii) For the City of Dallas, that area bounded on the west by Interstate 35, on the south by Interstate 20, on the east by Central Expressway (U.S. 75) and on the north by Woodall Rogers Freeway right of way.

(iii) For the City of Fort Worth, that area bounded on the west by Henderson Street, on the south by Interstate 20, on the east by Interstate 35 West, and on the north by the Trinity River.

(iv) For the City of San Antonio, that area bounded on the west and northwest by U.S. 81, on the south and southeast by Alamo Street from U.S. 81 to Victoria Street, and by Victoria Street to the Southern and Pacific Railroad tracks, on the east by the Southern and Pacific Railroad tracks, and on the northeast by Jones Avenue to U.S. 81.

(b) The provisions of this section apply to the Houston-Galveston Intrastate Region, the Dallas-Fort Worth Intrastate Region, and the San Antonio Intrastate Region (hereafter the "affected areas").

(c) Each appropriate governmental entity shall establish bus/carpool lanes and/or exclusive bus/carpool streets on streets and highways over which it has ownership or control in each central business district defined above and in each of the following traffic flow corridors:

(1) *Houston-Galveston AQCR.* (i) North and South corridors, Houston: Interstate 45 from North Loop 610 to central business district to South Loop 610.

(ii) North corridor, Houston: U.S. 59 North from North Loop 610 to Interstate 10.

(iii) West corridor, Houston: Interstate 10 from West Loop 610 to Interstate 45.

(iv) Southwest corridor, Houston: U.S. 59 South from West Loop 610 to Interstate 45.

(v) East corridor, Houston: Interstate 10 East from East Loop 610 to central business district.

(2) *Dallas-Fort Worth AQCR—Dallas.* (i) North and Southeast corridors: U.S. 75 North from Loop 635 North to central business district to Loop 635 South.

(ii) Northwest and South corridors: Interstate 35 from North Loop 635 to Commerce Street to South Loop 635.

(iii) Southeast corridor: U.S. 175 from East Loop 635 to central business district.

(iv) East corridor: Interstate 20 East from East Loop 635 to central business district.

(v) Northeast corridor: Interstate 30 from East Loop 635 to Interstate 20 East.

(vi) Northwest corridor: Harry Hines Boulevard from North Loop 635 to central business district.

(vii) West corridor: U.S. 80 from West Loop 12 to central business district.

(viii) South corridor: U.S. 67 from South Dallas City Limit to central business district.

(3) *Dallas-Fort Worth AQCR—Fort Worth.* (i) North corridor: Interstate 35 W from North Fort Worth City limit to central business district.

(ii) Northeast corridor: State Highway 121 from Loop 820 East to central business district.

(iii) East corridor: U.S. 80 from East Loop 820 to central business district.

(iv) Southeast corridor: U.S. 287 from Loop 820 east to central business district.

(v) South corridor: Interstate 35 West from South Loop 820 to central business district.

(vi) West corridor: Interstate 20 from U.S. 377 to central business district.

(vii) West corridor: Camp Bowie Boulevard from U.S. 377 to central business district.

(viii) Northwest corridor: U.S. 199 from Lake Worth Village to central business district.

(4) *San Antonio AQCR.* (i) North corridor, San Antonio: U.S. 281 from Loop 410 North to U.S. 81.

(ii) Northeast corridor, San Antonio: U. S. 81 B.R. from Loop 410 North to U.S. 81.

(iii) East corridor, San Antonio: Interstate 35 (U.S. 81) from Loop 410 East to central business district.

(iv) Southeast corridor, San Antonio: Interstate 37 from Loop 410 South to Interstate 35 (U.S. 81).

(v) Southwest corridor, San Antonio: Interstate 35 from Loop 410 South to Interstate 35 North (U.S. 81).

(vi) Northwest corridor, San Antonio: Interstate 10 (U.S. 87 North) from Loop 410 North to central business district.

(vii) West corridor, San Antonio: U.S. 90 from Loop 410 West to central business district.

(d) Each affected governmental entity shall submit to the Administrator, no later than June 1, 1974, a detailed compliance schedule showing the steps which it will take to establish bus/carpool lanes and/or bus/carpool streets in those traffic flow corridors and central business districts hereinbefore identified and to enforce the limitations on their use. Each schedule shall be subject to approval by the Administrator and shall include as a minimum the following:

(1) Identification of streets and highways that shall be designated for the use of bus/carpool lanes or bus/carpool streets. At least one street or highway in each traffic flow corridor and three streets or highways in each central business district must be so designated.

(2) The date by which each street or highway shall be so designated.

(3) Identification of additional streets or highways on which one lane shall be set aside during peak hours for the exclusive use of buses only. On such streets curb parking shall be prohibited during peak hours.

(e) In unusual situations, a traffic flow corridor listed in paragraph (c) of this section may be exempt from this section if an approval of the exemption is obtained from the Administrator. The application for exemption will not be accepted after March 1, 1974. Special circumstances justifying the need and appropriateness for an exemption, such as inappropriateness of use of buses or substitution of a different corridor in its place, must be given in detail with the application.

(f) Bus/carpool lanes and streets must be prominently indicated by distinctively painted lines, pylons, overhead signs, or physical barriers. Twenty-five percent of the lanes for each of the governmental entities must be established and fully operational by March 1, 1975; fifty percent by June 1, 1975; seventy-five percent by September 1, 1975; and one hundred percent by January 1, 1976.

(g) A signed statement by the chief executive officer of each governmental entity or his designee shall be submitted to the Administrator on or before January 1, 1975, to identify the source and amount of funds for allocation required by this section.

(h) Each affected governmental entity shall submit to the Administrator, no later than October 1, 1974, legally adopted regulations to implement and enforce the provisions of this section.

(i) The State of Texas may submit to the Administrator a mass transit incentive or other VMT or emission reduction measure for any area subject to this section that will achieve the same or greater reductions in VMT and hydrocarbon emissions as those anticipated from implementation of this section. If approved by the Administrator, such measure will apply in such area in lieu of this section. Application for approval of an alternate measure will not be accepted after December 1, 1973.

§ 52.2295 Management of parking supply.

(a) Definitions:

All terms used in this section but not specifically defined below shall have the meaning given them in parts 51 and 52 of this chapter.

(1) "Parking facility" (also called "facility") means a lot, garage, building or structure, or combination or portion thereof, on or in which motor vehicles are temporarily parked.

(2) "Vehicle trip" means a single movement by a motor vehicle which originates or terminates at a parking facility.

(3) "Construction" means fabrication, erection, or installation of a parking facility, or any conversion of land, a building or structure, or portion thereof, for use as a facility.

(4) "Modification" means any change to a parking facility which increases or may increase the motor vehicle capacity

of or the motor vehicle activity associated with such parking facility.

(5) "Commence" means to undertake a continuous program of on-site construction or modification.

(b) This section is applicable in the Houston-Galveston Intrastate Region.

(c) The requirements of this section are applicable to the following parking facilities in the area specified in paragraph (b) of this section, the construction or modification of which is commenced after August 15, 1973:

(1) Any new parking facility with parking capacity for 500 or more motor vehicles.

(2) Any parking facility which will be modified, and whose parking capacity after modification will be 500 or more motor vehicles.

(3) Any parking facility constructed or modified in increments which individually are not subject to review under this section, but which, when all such increments occurring since August 15, 1973, are added together, as a total would subject the facility to review under this section.

(d) No person shall commence construction or modification of any facility subject to this section without first obtaining written approval from the Administrator or an agency designated by him; provided, that this paragraph shall not apply to any proposed parking facility for which a general construction contract was finally executed by all appropriate parties on or before August 15, 1973.

(e) No approval to construct or modify a facility shall be granted unless the applicant shows to the satisfaction of the Administrator or agency approved by him that:

(1) The design or operation of the facility will not cause a violation of any control strategy which is part of the applicable implementation plan, and will be consistent with the plan's VMT reduction goals.

(2) The emissions resulting from the design or operation of the facility will not prevent or interfere with the attainment or maintenance of any national ambient air quality standard at any time within ten (10) years from the date of application.

(f) Any application for approval under this section shall include the following information:

(1) Name and address of the applicant.

(2) Location and description of the parking facility.

(3) A proposed construction schedule.

(4) The normal hours of operation of the facility and the enterprises and activities which it serves.

(5) The total motor vehicle capacity before and after the construction or modification of the facility.

(6) The number of people using or engaging in any enterprises or activities which the facility will serve on a daily basis and a peak hour basis.

(7) A projection of the geographic areas in the community from which people and motor vehicles will be drawn to the facility. Such projection shall include data concerning the availability of mass transit from such areas.

(8) An estimate of the average and peak hour vehicle trip generation rates, before and after construction or modification of the facility.

(9) An estimate of the effect of the facility on traffic patterns and flow.

(10) An estimate of the effect of the facility on total VMT for the air quality control region.

(11) An analysis of the effect of the facility on site and regional air quality, including a showing that the facility will be compatible with the applicable implementation plan, and a showing that the facility will not cause any national ambient air quality standard to be exceeded within ten (10) years from date of application. The Administrator may prescribe a standardized screening technique to be used in analyzing the effect of the facility on ambient air quality.

(12) Additional information, plans, specifications or documents required by the Administrator.

(g) Each application shall be signed by the owner or operator of the facility, whose signature shall constitute an agreement that the facility shall be operated in accordance with applicable rules, regulations, permit conditions and the design submitted in the application.

(h) Within 30 days after receipt of an application containing all of the information required by this section, the Administrator or agency approved by him shall notify the public, by prominent advertisement in the region affected, of the receipt of the application and the proposed action on such application (whether approval, conditional approval, or denial), and shall invite public comment.

(i) The application, all submitted information, and the terms of the proposed action shall be made available to the public in a readily accessible place within the affected air quality control region.

(j) Public comments submitted within thirty (30) days of the date such information is made available shall be considered in making the final decision on the application.

(k) The Administrator or agency approved by him shall take final action (approval, conditional approval, or denial) on an application within thirty (30) days after close of the public comment period.

(l) The State of Texas may submit to the Administrator a mass transit incentive or other VMT or emission reduction measure for any area subject to this section that will achieve the same or greater reductions in VMT and hydrocarbon emissions as those anticipated from implementation of this section. If approved by the Administrator, such measure shall apply in such area in lieu of this section. Application for approval of an alternate measure will not be accepted after December 1, 1973.

§ 52.2296 Bus/carpool matching and promotion system.

(a) Definitions:

(1) "Carpool" means two or more persons utilizing the same vehicle.

(2) "Bus/carpool matching and promotion" means assembling lists of commuters sharing similar travel needs. The aggregate of drivers and riders on each list identifies potential bus/carpools.

(3) "Time-origin-destination (TOD) information" means specifications of a driver or rider's work schedule, home and work locations, or the location of other desired origins and destinations of trips (such as shopping or recreational trips).

(4) "Pilot program" means a program that is initiated on a limited basis for the purpose of facilitating a future full scale regional program.

(5) All other terms used in this section which are defined in 40 CFR Part 51 are used herein with the meanings so defined.

(b) This section is applicable in the Houston-Galveston, Dallas-Fort Worth, and San Antonio Intrastate Regions (hereafter the "affected Regions").

(c) The State of Texas or an appropriate local agency approved by the Administrator shall implement a bus and carpool matching and promotion program in each affected region that will serve persons employed in the central business districts (as defined in § 52.2294 (a)(3)) of Houston in the Houston-Galveston Region, of Dallas and Fort Worth in the Dallas-Fort Worth Region, and of San Antonio in the San Antonio Region. The State of Texas or an appropriate local agency approved by the Administrator shall comply with the following provisions in establishing the program:

(1) A pilot program shall be initiated and fully operational by March 1, 1974.

(2) A program that will serve all persons employed in the central business districts of the areas specified in paragraph (c) of this section shall be initiated and fully operational by January 1, 1975.

(3) A timetable for implementation of the full program shall be submitted to the Administrator by March 1, 1974, and shall include legally adopted regulations establishing the program or dates by which the regulations will be adopted.

(d) Regulations adopted by the State of Texas or the approved local agencies shall include, as a minimum, the following:

(1) A method of collecting information which will include the following as a minimum:

(i) Provisions for each employee to receive an application form with a cover letter describing the matching program.

(ii) Provisions on each application for the applicant to specify his TOD information and the applicant's desire to drive only, ride only, or share driving.

(2) A computerized method of matching information that will have provisions for locating each applicant's origin and destination within a grid system in the urban area and semi-rural region surrounding incorporated cities with a population greater than 50,000, and matching applicants with compatible TOD information.

(3) A method for providing continuing service so that the master list of all applicants is retained and available for use by new applicants and a method of periodically updating the master list to

remove applicants who have moved from the area served.

(4) An agency or agencies responsible for operating overseeing and maintaining the bus/carpool computer matching system.

(e) The State of Texas may submit to the Administrator an alternate mass transit incentive or VMT or emission reduction measure for any area subject to this section that will achieve the same or greater reduction in VMT and hydrocarbon emissions as those anticipated from implementation of this section. If approved by the Administrator, such measure will apply in such area in lieu of this section. Application for approval of an alternate measure will not be accepted after December 1, 1973.

§ 52.2297 Employers provision for mass transit priority incentives.

(a) This section is applicable in the Houston-Galveston, Dallas-Fort Worth, and San Antonio Intrastate Regions (the "Regions").

(b) Each employer in the Regions who employs 1,000 or more persons and who maintains more than 700 employee parking space shall, on or before February 1, 1974, submit to the Administrator an adequate transit incentive program designed to encourage the use of mass transit and discourage the use of single-passenger automobiles by his employees. This program shall contain provisions for subsidies to employees who use mass transit, reductions in the number of employee parking spaces or surcharges on the use of such spaces by employees, provision of special charter buses or other modes of mass transit for the use of employees, preferential parking or other benefits to employees who travel to work by carpool and/or any other measures acceptable to the Administrator. By April 1, 1974, the Administrator shall approve such program for each employer if he finds it to be adequate, and shall disapprove it if he finds it not to be adequate. Notice of such approval or disapproval will be published in this part.

(c) "Employee parking space" means any parking space reserved or provided by an employer for the use of his employees.

(d) In order to be approvable by the Administrator, such program shall contain procedures whereby the employer will supply the Administrator with semi-annual certified reports which shall show, at a minimum the following information:

(1) The number of employees at each of the employer's facilities within the Regions on October 15, 1973, and as of the date of the report.

(2) The number of (i) free and (ii) non-free employee parking spaces provided by the employer at each such employment facility on October 15, 1973, and as of the date of the report.

(3) The number of employees regularly commuting to and from work by (i) private automobile, (ii) carpool, and (iii) mass transit at each such employment facility on October 15, 1973, and as of the date of the report.

(4) Such other information as the Administrator may prescribe.

(e) If, after the Administrator has approved a transit incentive program, the employer fails to submit any reports in full compliance with paragraph (d) of this section, or if the Administrator finds that any such report has been intentionally falsified, or if the Administrator determines that the program is not in operation or is not providing adequate incentives for employee use of carpools and mass transit, the Administrator may revoke the approval of such plan. Such revocation shall constitute a disapproval.

(f) By April 1, 1974, the Administrator shall prescribe a transit incentive program for each employer to whom paragraph (b) of this section is applicable if such employer has not submitted a program. By June 1, 1974, the Administrator shall prescribe a transit incentive program for each employer to whom paragraph (b) of this section is applicable if the program submitted is not adequate. Within two months after any revocation pursuant to paragraph (e) of this section, the Administrator shall prescribe a transit incentive program for the affected employer. Any program prescribed by the Administrator shall be published in this Part.

§ 52.2298 Monitoring transportation mode trends.

(a) The State of Texas or a designated agency approved by the Administrator shall monitor:

(1) The actual per vehicle emissions reductions occurring as a result of the retrofit devices and inspection and maintenance programs required under §§ 52.2290 and 52.2291.

(2) The observed changes in vehicle miles traveled (VMT) and average vehicle speeds as a result of the measures required under §§ 52.2293 (if implemented), 52.2294, 52.2295, 52.2296, and 52.2297.

(b) No later than March 1, 1974, the State of Texas shall submit to the Administrator a detailed program demonstrating compliance with paragraph (a) of this section in accordance with § 51.19 (d) of this chapter. The program description shall include the following:

(1) The agency or agencies responsible for conducting, overseeing and maintaining the monitoring program.

(2) The administrative process to be used.

(3) A description of the methods to be used to collect the emission reduction, VMT reduction, and vehicle speed data, including a description of any modeling techniques to be employed.

(4) The funding requirements, including a signed statement from the Governor or State Treasurer or their respective designees identifying the source and amount of funds for the program.

(c) All data obtained by the monitoring program shall be included in the quarterly report submitted to the Administrator by the State, as required at § 51.7 of this chapter, and in the format prescribed in Appendix M Part 51 of this chapter. The first quarterly report shall cover the period January 1–March 31, 1975.

[FR Doc.73–23187 Filed 11–5–73;8:45 am]

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 52]

TEXAS IMPLEMENTATION PLANS

Employer Provision for Mass Transit Priority Incentive

The final transportation control plan for Texas, contained elsewhere in this issue of the FEDERAL REGISTER (38 FR 30633), promulgates a regulation entitled "Employers provision for mass transit priority incentive" (40 CFR 52.2297). This regulation was included because employers who provide parking spaces to their employees thereby encourage employees to drive to work rather than to take carpools or to use mass transit. Such employers may therefore be regulated as "indirect sources" of air pollution, as that term is defined in the General Preamble. At the same time, individual employers are singularly well equipped to establish and administer programs to reduce the dependence of their employees on the single-passenger automobile.

The regulation contained in the plan as promulgated is phrased in somewhat general terms. This form was chosen because of the expressed preferences of EPA's Region VI, and because the Administrator has every reason to believe that, if it is implemented in the proper spirit, it will produce VMT reductions equivalent to those that could be expected from more specific measures. If this hope proves unfounded, however, more specific measures will have to be substituted. Accordingly, one such specific measure (similar to the measure being promulgated for California) is today being proposed for comment. Comment will be received on this proposal until December 6, 1973.

This notice of proposed rulemaking is issued under authority of sections 110 and 301(a) of the Clean Air Act, 42 U.S.C. 1857c–5 and 1857g.

Date: October 25, 1973.

RUSSELL E. TRAIN,
Administrator.

Section 52.2297 of Title 40 of the Code of Federal Regulations (set forth at 38 FR 30650) would be amended to read as follows:

§ 52.2297 Employers provision for mass transit priority incentives.

(a) Definitions:

(1) For the purposes of this section "carpool" means a vehicle containing two or more persons.

(2) "Commercial parking rate" means the average daily rate charged by the three operators of commercial parking facilities containing 100 or more commercial parking spaces which are closest in location to any employee parking space affected by this regulation.

(3) "Employer" means any person or entity that employs 1000 or more persons.

(4) "Employee parking space" means any parking space reserved or provided by an employer for the use of his employees.

(b) This section is applicable in the Houston-Galveston, Dallas-Fort Worth, and San Antonio Intrastate Regions (the "Regions").

(c) Each employer in the Regions who maintains more than 700 employee parking spaces shall, commencing on the date listed, charge no less than the following specified daily rate for the use of any such employee parking space by employees driving to work and not traveling in carpools:

Effective date:	*Daily rate commercial rate (CR) plus*
July 1, 1974	$1.00
July 1, 1976	CR plus $2.00
July 1, 1975	CR plus $2.50

No employer may charge employees traveling to work by two-person carpools more than half the parking rate specified for non-carpool vehicles by this table. Carpools of three or more shall be allowed to park free of charge, and shall be allotted the spaces closest to the employment facility. Any net revenues derived from this surcharge program by an employer shall be used to subsidize his employee's use of mass transit.

(d) Each employer subject to an obligation under paragraph (c) of this section, shall on the first date such an obligation becomes effective, also:

(1) Institute a program of reimbursing employees for their expenses of utilizing mass transit. However, such reimbursements need not exceed $200 per year per employee.

(2) Take all reasonable steps to encourage employees to commute to work by subscription charter bus and similar privately owned mass transit facilities.

(e) Each employer subject to an obligation under paragraph (c) of this section shall, at least three months prior to the effective date of any such obligation, submit to the Administrator a detailed compliance schedule setting forth the steps it will take to meet those requirements. The compliance schedule shall include a procedure for checking vehicles to see whether or not they are carpool vehicles, a procedure for collecting the fees required to be collected hereunder, for disbursing any sums to individual employees in compensation for their use of mass transit and for ensuring that such disbursements are used only for that purpose. It shall specify the steps that will be taken to determine the commercial parking rate for each affected employment center and to encourage use of such private transit facilities as charter buses.

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